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ABSTRACT

This report examines the demographic and language characteristics and educational aspirations of Asian American and Hispanic American eighth graders and relates that information to their mathematical ability and reading comprehension as measured by an achievement test. Special attention is paid to students who come from homes in which a non-English language is spoken. The report uses information selected from the National Education Longitudinal Study of 1988 (NELS:88). The NELS:88 administered questionnaires and tests to a national sample of 25,000 eighth grade students in over 1,000 public and private schools in spring 1988. A second data collection was conducted in spring 1990. Of the 1,505 Asian American students evaluated, 73 percent were reported as language minorities (LMs), while 77 percent of the 3,129 Hispanic American students evaluated were LMs. Of the LM students, 66 percent of the Asian Americans had high English proficiency as compared to 64 percent of the LM Hispanic Americans. Both Asian American and Hispanic American groups had 4 percent of LM students showing low English proficiency. Overall, the study found many similarities between the two groups. However, differences are apparent when data are divided along language proficiency, mathematics achievement, aspiration, and other measures. Statistical data are provided in 33 tables and 44 graphs. Appendices present selected survey questions, technical notes and methodology, and 109 standard error tables. (JB)

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Statistical Analysis Report February 1992

Language Characteristics and Academic Achievement: A Look at Asian and Hispanic Eighth Graders in NELS:88

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Foreword

This report examines the demographic and language characteristics and educational aspirations of Asian and Hispanic eighth graders and relates that information to their mathematical ability and reading comprehension as measured by an achievement test. Special attention is paid to students who come from homes in which a non-English language is spoken. The report uses information selected from the National Education Longitudinal Study of 1988 (NELS:88).

The National Education Longitudinal Study of 1988 is a large-scale study designed and sponsored by the National Center for Education Statistics (NCES), with support from the Office of Bilingual Education and Minority Language Affairs (OBEMLA) and the National Science Foundation (NSF). NELS:88 provides a variety of data about the 1988 eighth graders as they move through the U.S. school system and into the many and varied activities of early adulthood. The study began with the administration of questionnaires and tests to a nationally representative sample of 25,000 eighth graders in more than 1,000 public and private schools in the spring of 1988. Data were also collected from the student's parents, teachers, and school principals. NELS:88 has continued with a second collection of information from the 1988 eighth graders in the spring of 1990. A third data collection, along with the collection of high school transcripts, will take place in 1992.

The NELS:88 data supply an incredibly rich source of information about factors that contribute to a student's academic performance and social development. We hope that this report on Hispanic and Asian eighth graders will inspire other researchers to use these data to pursue their own interests and concerns.

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Ellen Liebman created the analysis file, ran exploratory analyses, and produced the many tables that form the basis of this report. I cannot thank her enough for her patience, attention, and assistance through the many changes in definitions and categories that were made to create the final tables. I also wish to thank Laura Horn for her valuable advice and support during the analysis and construction of the report. Sharlene Mulder, Melinda Hobbs, and Elliot Wilen provided computer, spreadsheet, and graphic assistance in producing the tables and figures.

Chuck Byce, Gary Hoachlander, Andrea Livingston, and Brett Threlkeld read various versions of this report, and I thank them for their numerous editorial contributions. Maria Pennock-Roman of the Educational Testing Service, Jorge del Pinal of the Bureau of the Census, Esther Yao of the Office of Bilingual Education and Minority Language Affairs, John Burkett of the Office of Educational Research and Improvement, and David Moguel and James English of the Office of Planning and Budget Evaluation read the report and helped revise it. Finally, I wish to thank Edie McArthur, Raul Garza, Jeff Owings, Marilyn McMillen, Bob Burton, Sue Ahmed, and particularly Peggy Quinn of NCES for their many thoughtful comments.

Highlights

This study of Asian and Hispanic eighth graders reports on the differences and similarities among the students, with an emphasis on their language skills. Basic demographic information, such as students' ethnicity, nativity, and socioeconomic status (SES) are compared, as well as how students see themselves in terms of their language skills and educational plans. Students who indicate they are from homes in which a second language is spoken are termed Language Minority (LM), and for those students, a language proficiency measure was developed—for both English and the students' home language—according to student self-assessments. In addition, all students are defined by their teachers as being LM and/or Limited English Proficient (LEP), the latter term referring to those students who would derive little benefit from school instruction conducted only in English.

Asian/Pacific Islander Student Population

The students' ethnicity

- The Asian students represent a multitude of ethnic peoples. Approximately one-fifth (17 percent) are Chinese; another one-fifth (20 percent) are Filipino. More than one-tenth (13 percent) are Southeast Asian, and another one-tenth (11 percent) are Korean. The next largest ethnic groups are the Pacific Islanders and the South Asians (9 percent each), followed by the Japanese, who make up 6 percent of the student population. The remaining students (15 percent) make up an "other" category and include West Asians, Middle Easterners, and other ethnic groups.

Their language skills

- Almost three-fourths of the Asian student population come from bilingual families. However, the majority of the Asian LM students indicate that they are not very proficient in their home language. Fifty-nine percent indicate that they have a low proficiency in their home language, and only 12 percent indicate a high proficiency.

- Among Asian students from bilingual homes, 66 percent have a high English language proficiency, 29 percent have a moderate proficiency, and 4 percent a low proficiency.

- Asian LM students with a high SES background are more likely to have a higher English proficiency than those from a low SES background. While 78 percent of Asian LM students of high SES have a high English proficiency, only 50 percent of low SES students have such a proficiency.

How they are seen by their teachers

- Although 73 percent of the Asian students come from bilingual homes, only 27 percent are identified by at least one of their teachers as LM students. Frequently, teachers are unaware that a second language is spoken in an LM student's home and define the student as non-LM (47 percent). Less frequently, a student is identified by a teacher as LM, but states that only English is spoken in the home (1 percent).

Their aspirations

- Asian LM students with a low English proficiency are less likely than those with greater proficiency to plan on enrolling in an academic program while in high school (24 percent versus 46 percent, after adjusting to control for SES). Rather than having chosen another type of program, they are more likely than the more proficient to indicate that they are unsure of their intentions or that they have other plans (57 percent versus 27 percent, after SES adjustment). These students are also less likely than those who are more highly proficient to express a high degree of confidence that they will eventually graduate from high school (60 percent versus 83 percent, after SES adjustment).

- Asian LM students are more likely than Asian non-LM students to intend to pursue an advanced degree after college graduation (39 percent versus 28 percent, after adjusting to control for SES). In addition, they are less likely than non-LM students to have no plans for further education after their high school graduation (4 percent versus 12 percent, after SES adjustment).

Their achievement

- In general, Asian students of low SES backgrounds failed to achieve the basic reading and math performance levels at a higher rate than did Asian students of high SES: 38 percent of low SES students failed to achieve the basic reading level, compared with 12 percent of high SES students. On the math test, 39 percent of low SES students failed to achieve the basic level, as opposed to 14 percent of high SES students.

- Similar percentages of Asian non-LM and LM students were unable to achieve the basic level in reading (23 percent and 24 percent, respectively) and in math (27 percent and 23 percent, respectively). Among Asian LM students, English proficiency is related to achieving the basic reading level, but not to achieving the basic math level.

- Overall, Asian students with no aspirations for further education after high school failed to achieve basic achievement levels at higher rates than did students with plans for college. Forty-five percent and 51 percent of students with no further educational plans failed to achieve the basic levels on the reading and math tests. Although smaller percentages of students with plans for a college degree failed to achieve the basic levels, these percentages are still substantial. Twenty-one percent and 22 percent of Asian students intending to graduate from college were unable to achieve the basic reading and math levels, respectively.

Hispanic Student Population

The students' ethnicity

- About two-thirds (62 percent) of the Hispanic student population are Mexican or Mexican-American. Eleven percent are Puerto Rican, while 4 percent are Cuban. Twenty-three percent of the Hispanic students described themselves as "other Hispanic."

Their language skills

- About three-fourths of the Hispanic student population come from bilingual homes. However, the majority of Hispanic LM students indicate that they are not very proficient in their home language. Only 16 percent indicate they have a high proficiency in their home language, while 84 percent indicate only a low or moderate proficiency.

- Among Hispanic LM eighth graders, SES is directly related to English proficiency. While 83 percent of high SES students have a high English proficiency, only 56 percent of low SES students have such a proficiency.

- Among Hispanic LM students, 64 percent have a high English language proficiency, 32 percent have a moderate proficiency, and 4 percent have a low proficiency.

How they are seen by their teachers

- Although 76 percent of Hispanic students indicate that a second language is spoken in the home, only 39 percent are identified by at least one of their teachers as LM students. Frequently, teachers are unaware that a second language is spoken in the home and define the students from bilingual homes as non-LM (41 percent). Less frequently, a student who indicates only English is spoken at home is defined as LM (4 percent).

Their aspirations

- Hispanic LM students with a high English proficiency are more likely than those with a low proficiency to plan on enrolling in an academic program while in high school (25 percent versus 12 percent, after adjusting to control for SES). They are less likely than moderately proficient students to indicate that they are unsure of their intentions or that they have other plans (36 percent versus 42 percent, after SES adjustment).

- About 38 percent of the Hispanic LM students with a low English proficiency have no plans for further education after high school and 9 percent intend to continue their education after college. By contrast, only 14 percent of the highly English proficient have no plans after high school, and 24 percent intend to continue their education after college. (These figures have been adjusted to control for differences in SES.)

Their achievement

- Similar percentages of Hispanic non-LM and LM eighth graders failed to achieve the basic levels of performance on the reading (30 percent and 31 percent, respectively) and math (36 percent and 37 percent, respectively) achievement tests. Among LM students, those with low proficiency in English failed to achieve at a much higher rate than did students with high proficiency.

- In general, Hispanic students of low SES backgrounds failed to achieve the basic reading and math performance levels at a higher rate than did students of high SES: 37 percent of low SES students failed to achieve the basic reading level, compared with 19 percent of high SES students. On the math test, 42 percent of low SES students failed to achieve the basic level, compared with 22 percent of high SES students.

- Overall, Hispanic students with no aspirations for further education after high school failed to achieve basic achievement levels at higher rates than did students with plans for college. For example, 43 percent and 52 percent of students with no further plans failed to achieve the basic levels on the reading and math tests, respectively, while 24 percent and 29 percent of students who planned to graduate from college were unable to achieve those same levels.

The following chart presents a few of the findings from both the Asian and Hispanic eighth-grade populations, in order to illustrate the similarities and differences between the two groups. Chapter 4 presents a more detailed and thorough comparison between the two populations.

	Asian eighth graders	Hispanic eighth graders
LM status, student reported		
LM	73%	77%
Non-LM	27	23
LM students' English proficiency		
High	66	64
Moderate	29	32
Low	4	4
Proportions of students failing to achieve the basic test levels		
Reading achievement test		
High SES	12%	19%
Middle SES	27	27
Low SES	38	37
Non-LM students	23	30
LM students	24	31
High English proficiency	19	28
Moderate proficiency	33	34
Low English proficiency	63	69
Math achievement test		
High SES	14	22
Middle SES	25	34
Low SES	39	41
Non-LM students	27	36
LM students	23	37
High English proficiency	22	35
Moderate proficiency	25	37
Low English proficiency	24	58

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Introduction

Purpose of the Study

The challenge of educating students with limited English language skills is not a new one for American educators. In a society with a population that contains mostly immigrant peoples from diverse cultural and linguistic backgrounds, historically, the school has played a major role in naturalization. Many immigrant children first learned English by hearing teachers and classmates use it in the classroom, by studying their textbooks, and by participating to whatever extent they could in both the instructional lessons conducted within school and in extracurricular and social activities occurring outside the classroom. However, acquisition of the English language did not come easily to all immigrant children.

In recent years, educators have become increasingly concerned that during the crucial period that students are beginning to learn and understand the English language, they are not able to adequately comprehend the lessons that are more readily understood by their English-speaking peers. However, learning the English language is only one of many complex problems facing immigrant children. High dropout rates and low academic achievement, persistent major societal problems, are widespread among language minority students. Indeed, both educators and the courts have identified language and related cultural differences as key factors contributing to the educational failure of minority students.[1]

As different methods and programs have been proposed to teach English skills to children who use languages other than English, a number of terms have been used to classify these children. Two of these terms are *Language Minority (LM)* and *Limited English Proficient (LEP)*. Language minority refers to children who come from homes in which a non-English language is spoken. The English language skills of language minority children range from not being able to speak English at all to being very fluent in English. Since those who study language acquisition are still debating about definitions, Limited English Proficient has several definitions; conceptually, however, LEP means that the children have sufficient difficulty with English that they are at a disadvantage in classes taught entirely in English.

During recent decades, a series of events have called particular attention to the problem of low achievement among language minority students. First, growth in the immigration of families and children from countries in Latin America and Asia, coupled with the now famous (and largely Anglo) "baby bust" of the 1970s, has led to larger proportions of language minority children enrolled in our nation's schools. Furthermore, as the international economy has become more competitive and technologically sophisticated, the quality of the U.S. work force has been more carefully scrutinized. Finally, because fewer new jobs are available to poorly educated workers, educational failure—whatever the cause—is a growing problem. These developments have prompted educators and policymakers to intensify their efforts to enhance the educational achievement of all students—especially that of language minority students.

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[1] A.H. Leibowitz, *Federal Recognition of the Rights of Minority Language Groups* (National Clearinghouse for Bilingual Education, 1982).

In addressing the problems of this rapidly growing segment of the U.S. population, much research has been conducted on the educational experiences of language minority students. A number of related studies have concentrated on the educational experiences of ethnic minorities overall, a group that includes language minority students. The findings of many of these studies have shown that Hispanics have lower high school achievement, higher dropout rates, and lower college attendance than whites. Because Hispanics are the fastest growing minority group in the United States, this is a matter of grave concern.[2] Asians, on the other hand, have often demonstrated high achievement, particularly in mathematics, but researchers point out that some Asian ethnic subgroups, such as Filipinos and Pacific Islanders, have not been as academically successful. They also note the importance of separating the more recent waves of immigration from previous ones to differentiate upper class students from those of other backgrounds. Finally, researchers have been somewhat concerned that Asian students do not develop their language potential because their high achievement in math and science makes schools reluctant to allocate resources toward improving their other talents and potentials.[3]

Some research has focused on isolating the factors in school achievement. Much of this research indicates that socioeconomic status, English language ability, and place of nativity specifically affect Hispanic students' achievement in school. For instance, Hispanic high school students have indicated more often than white, non-Hispanic students that their school progress has been thwarted by financial problems, family obligations, parental disinterest, and lack of a study space at home.[4] Finally, other research points to inadequacies in the schools that Hispanic students often attend and reports that they are underfinanced, overcrowded, and lacking in bilingual staff.[5]

Despite the recent attention these issues have received, few studies have been conducted on the academic achievement of language minority youth using nationally representative samples, especially those that include students with limited English proficiency. However, a recent study conducted by the National Assessment of Educational Progress (NAEP) does use a nationally representative sample of language minority students. In a supplement to its regular assessment, NAEP conducted a special study of the reading and mathematics performance of language minority children. This study confirmed somewhat the importance of English language competence, particularly in the educational attainment of Hispanics, although other factors were found to influence language competency—parental education and aspirations, language use, socioeconomic status, nativity, locus of control, and school characteristics.[6] Nevertheless, this study had several weaknesses: its most serious shortcoming was that Limited English Proficient (LEP) students were not included.

The purpose of this study is to build upon research that has already been conducted, exploring some of the factors that influence the achievements of Asian and Hispanic students in this country using data from the National Education Longitudinal Study of 1988 (NELS:88). Because it contains suitably large numbers of students of various ethnicities as well as LEP students who have been excluded from previous longitudinal surveys, the NELS:88 survey is particularly suited to exploring a variety of questions about students' ethnicity and language skills. This particular report establishes a basic understanding of the backgrounds, language skills, and

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[2]National Education Association, *Hispanic Concerns* (1986).

[3]National Education Association, *Asian and Pacific Islander Concerns* (1986).

[4]R.P. Duran, *Hispanics' Education and Background: Predictors of College Achievement* (New York: College Entrance Examination Board, 1983), 44.

[5]NEA, *Hispanic Concerns*, 8–9.

[6]Joan Baratz-Snowden, Donald Rock, Judith Pollack, and Gita Wilder, *The Educational Progress of Language Minority Children: Findings from the NAEP 1985–86 Special Study* (National Assessment of Educational Progress/Educational Testing Services, May 1988).

academic abilities of the 1988 Asian and Hispanic eighth graders, providing an initial level of information to which changes measured during the follow-up surveys of 1990 and 1992 can be compared.

NELS:88 asked each of the students and one of their parents in-depth questions about their nativity and length of residence in the United States; their communication skills in English and in their home language, if applicable; and their expectations of the student's future education. In addition to providing more information on language usage and skills than previously available data sets, NELS:88 oversampled Asian and Hispanic students with funds from the Office of Bilingual Education and Minority Language Affairs (OBEMLA). Of the approximately 25,000 eighth-grade students sampled for NELS:88, about 3,000 are Hispanic and about 1,500 are Asian or Pacific Islanders.[7] For each student participating in the base-year survey, data were collected from two eighth-grade teachers, a school administrator, and a parent of the student. Several procedures were instituted to ensure a high response rate from parents of Hispanic and Asian students. First, when necessary, the contractors provided a parent questionnaire in Spanish. In addition, Spanish-speaking interviewers contacted parents to encourage them to complete the survey and often administered it over the telephone. Finally, although parent questionnaires were not available in any Asian language, letters urging parents to complete the survey and to seek help with translation if needed were sent to non-English-speaking Asian parents who were identified by the schools.

Out of the 25,000 students who participated in the NELS:88 survey, approximately 1.5 percent (107 Asian and 220 Hispanic students) were identified by their teachers as LEP. Missing from this percentage, however, are those students whom principals excluded from the study because of language difficulties. The NELS:88 survey excluded certain kinds of students: specifically, mentally handicapped students and those not proficient in English, for whom the NELS:88 tests would be unsuitable, and students having physical or emotional problems that would make participation in the survey unwise or unduly difficult. Seven ineligibility categories were employed at the time of the student sample selection; school coordinators at each sample school were given student rosters on which to mark the eligible and ineligible students. One of the seven categories pertained to language, and referred to students who do not have English as the mother tongue and who have insufficient command of English to complete the NELS:88 questionnaires and tests. It was up to the schools to define who they thought would be incapable of completing the instruments in English. The decision was to be made on an individual basis, and LEPs were NOT to be excluded categorically.

Among the total number of eighth-grade students enrolled in the 1,000 participating schools (202,966 students), 1.9 percent (3,831 students) were declared ineligible for the survey because the principals felt that language limitations would cause these students to have difficulty completing questionnaires and/or cognitive tests. If these students (those with language limitations) had not been excluded from the sampling frame, it is estimated that the number of additional students who may have been classified as LEP by their teachers may have increased by approximately 460 (12 percent sampling ratio times 3,831 excluded) students. This 12 percent sampling ratio was used to create the original sample of 25,000 students from a total number of 202,966 eighth-grade students who were enrolled in the 1,000 participating schools. Because these students were excluded from the survey, there is a potential for bias in the base-year data. Thus, the base-year NELS:88 sample is clearly not representative of all eighth-grade language minority students. For the purposes of this report, the population being studied are those Asian and Hispanic students (4,500) whom the principals felt could complete the survey instruments. Although the sample of LEP students included in the base year of NELS:88 is smaller than it would have been if excluded students had been sampled, sufficient numbers are available (327) to

[7]The specific ethnic subgroups included in these categories will be outlined in chapter 1. It is important to note that throughout the report "Asian" refers to both Asians and Pacific Islanders; the term "Asian" is used in the interest of readability.

produce the selected LEP analyses presented in this report.[8] To examine the sample sizes used for the different analyses in this report, see tables 7 through 10 in appendix B. No imputation was performed on any of the analysis files received from NCES.

General Approach

This study capitalizes on the oversampling of ethnic minority students, the inclusion of a sufficient number of teacher-identified LEP students, and the lessons learned from previous studies. Four considerations figured into the design of this analysis: the unique characteristics of each of the two populations, the diversity within each population, the importance of finding better measures of language background and ability, and the need to compare student performance with behavioral standards, rather than attempting intergroup comparisons.

First, the Asian and Hispanic students were always analyzed separately. Given the cultural differences of these groups and their individual histories in this country, it did not seem useful to combine these groups for an overall analysis, nor to use one group as a standard by which to measure the other. At the end of the report, however, differences and similarities between the Asian and Hispanic populations are noted.

Second, because of the diversity within the Hispanic and Asian student populations, whenever possible, the analysis focused on subgroups of similar students. One traditional approach has been to focus on ethnic subgroups within the Asian and Hispanic populations, which is based on the perception that there are important differences among Hispanic students of different ethnic descents (for example, Cubans versus Mexican-Americans) and among students of different Asian descents (for example, Chinese versus Southeast Asians). When possible, this distinction has been made in this study. Another approach focuses on distinguishing natives from non-natives and on differentiating students who have been living in the United States for a brief time from those who have resided here for several years.[9] Recent work suggests that for Asians and Hispanics, as for white non-Hispanics, differences in socioeconomic status are more important than variations in ethnic background. In analyzing the results of the tabulations, all these factors were considered.

The third principle, the importance of finding better measures of language background and ability, reinforces the fact that language minority (LM) students and students with limited English proficiency (LEP) are not homogeneous populations in terms of their language proficiency or language use. In this analysis, students were analyzed according to their LM and LEP status, as identified by their teachers, and also with regard to how they themselves assessed their English skills.

Finally, when analyzing academic achievement, Asians were not compared to Hispanics nor were either group compared with the white non-Hispanic population. Instead, the language patterns of students in these two racial–ethnic groups were described as accurately as possible, with the objective of determining both how these patterns relate to other background

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[8]Given the potential for undercoverage bias, NCES has taken steps to correct this situation in future NELS:88 followups and reports by subsampling students who were excluded during the base year. During the spring of 1991, approximately 600 base-year ineligible students were resurveyed to determine status (e.g., dropout) and eligibility to complete modified questionnaires. As an additional measure to reduce potential bias, at the request of OBEMLA, NCES has freshened the first follow-up sample with tenth-grade LEP students who probably would have been excluded from the base-year survey. These students (e.g., base-year ineligible and freshened) will be added to follow-up files. All future NELS:88 language minority and LEP reports will utilize these corrected files.

[9]Other approaches include distinguishing refugees from non-refugees, or one wave of immigrants from another. However, the NELS:88 data do not provide this information.

characteristics and how their language usage and ability affect their academic achievement. The NELS:88 test battery scores, converted into behaviorally anchored levels of performance, provide an objective comparison measure when relating background and language characteristics to achievement. These performance levels are described in further detail in chapter 1.

Organization of the Report

This report is divided into four chapters. The first chapter, Measures and Definitions, discusses the issues and definitions of the language variables used to categorize students in the analysis, describes an adjustment procedure that is used to control for the influence of socioeconomic status, and presents the measures of academic achievement—the achievement tests the students took when participating in the NELS:88 Survey. This chapter also defines key terms that are used throughout the report.

The next two chapters of the report discuss the major findings of the research and are very similar to one another in format. Chapter 2 presents a profile of the Asian eighth graders, while chapter 3 is devoted to the Hispanic eighth graders. Each chapter contains three sections, with each section describing a particular facet of the bilingual student population such as ethnicity, language proficiency, nativity and residency; teachers' perspectives; and the students' educational experiences and aspirations. Occasionally, the characteristics of the entire Asian or Hispanic student population are described, but the focus is on the language minority students. Each of the three sections concludes with an investigation of the differences among the students who were not able to achieve the basic level of performance on the reading and math achievement tests.[10] At the end of both chapter 2 and chapter 3 is a brief review of the general findings and the background factors most strongly related to underachievement.

The report concludes with a chapter that briefly compares the findings from the Asian and Hispanic student populations. Finally, there are several appendices that explain the variables used in this study, describe the survey methodology used for NELS:88 and the various procedures used for this analysis, and present the standard errors for the estimates reported within the text.

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[10]All comparisons cited have been tested for statistical significance using Bonferroni adjustments and are significant at the $p \leq .05$ level unless otherwise noted. The regular alpha is adjusted, based on the number of possible comparisons. See appendix B for a discussion of the Bonferroni procedure.

Chapter 1

Measures and Definitions

Throughout this report, students and parents are described as having low, moderate, or high language proficiency and are also referred to as being frequent, moderate, or infrequent users of their home language. The following section briefly summarizes how these categories were created and applied. Students were also divided into subgroups on the basis of ethnicity; the peoples or nationalities that comprise the Asian and Hispanic groups are discussed below. This chapter concludes by describing the achievement tests taken by the students and the interpretation underlying the possible levels of achievement.

Language Proficiency Measures

A number of questions in the NELS:88 survey explore the students' language history, use, and abilities. Students who responded that a non-English language was spoken in the home were asked for more detail about their use of both languages—English and the non-English language used most often by the student.[11] Throughout this report, the non-English language has been called the students' *home language*. The term *home language*, however, ought to be interpreted with caution; it often conveys the idea that this is the language the student learned first, speaks most often, or most often uses at home. However, in response to the follow-up question, "What language do the people in your home *usually* speak?" (survey emphasis), 30 percent of both the Asian and Hispanic students with two languages spoken in the home responded "English."

Two series of questions in the NELS:88 survey asked students to assess their ability to communicate with others; each series contained four items. Only language minority students—those who reported that a language other than English was spoken in their home—had the opportunity to respond to these sets of questions. The four items contained in the first language assessment series requested the students to determine how well they understood spoken English, as well as how well they spoke, read, and wrote English. The second language series asked students to assess these same four skills in their home language. Two similar series of questions on the parent questionnaire asked about the parent's English and home language communication skills.

One problem in interpreting the students' responses to the language ability questions is the difficulty of determining what point of reference students used for comparison when answering the question. For example, when assessing their English speaking skills, students could respond to the question "How well do you speak English?" in four possible ways: (a) very well, (b) pretty well, (c) well, or (d) not very well.[12] Given such subjective responses, students whose first language was other than English might be comparing their English abilities to monolingual English speakers, to their siblings, or perhaps to their parents, with each different reference point presumably affecting their response. For example, if a student's first language is Vietnamese, but she has been speaking English for some time, she might compare her present ability to her original language skills when just beginning to learn the language. Or perhaps she might compare her English-speaking skills to her Vietnamese skills. It is also possible that students with low self-

[11]The screening question was worded "Is any language other than English spoken in your home?" Students responded either "yes" or "no."

esteem might assess themselves at a lower level than an equally skilled person with greater self-esteem.

Another limitation of the study was the exclusion of many Limited English Proficient (LEP) students from the sample. The base-year NELS:88 sampling procedures instructed principals to exclude eighth graders who they thought were not sufficiently proficient in English to complete the questionnaire, which resulted in the elimination of 3,831 students (1.9 percent) from the eighth-grade sample population. Among the students who were included in the survey, only 327 were identified as LEP by their teachers; thus, those included are the most proficient of the LEP students. To call attention to the fact that these students may not be representative of all LEP eighth graders, they are identified throughout the report as *non-excluded teacher-identified LEPs*, abbreviated as *NETILs*.

Despite the limitations of the data, answers to the four questions within each language assessment series were used to construct a single *language proficiency* measure.[13] Students' answers were averaged into a mean score. The higher the combined score, the higher the students had assessed their ability to perform these four skills. Next, this measure was converted into "low," "medium," and "high" proficiency. If a student had a score of four (meaning they had answered "very well" to every skill assessment), they were defined as being *highly proficient*. Students with scores equal to and below two (meaning that they had responded "not very well" or "well" to at least two skill assessments) were determined to have a *low proficiency*. The remaining students (whose mean score fell between two and four) were placed into a *moderately proficient* category. This scaling procedure was also used to determine the students' home language proficiency, and the parent's English and home language proficiency. Table 1.1 presents the percentages of Asian and Hispanic students with various English language and home language proficiency levels. It bears repeating that only those students who are language minority have measurable English language and home language proficiency levels; students from monolingual homes were not asked to assess their communication abilities.

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[12]There were five possible responses for the home language skill assessment including those mentioned above and "not at all."

[13]Appendix A duplicates the survey questions used to construct the language proficiency measures. Factor and reliability analyses were conducted on this measure of proficiency to determine the propriety of combining these individual questions into a single measure. The technical notes (appendix B) contain further details about the results of these analyses.

Table 1.1—Percentage of 1988 language minority eighth graders, by self-reported English language and home language proficiency

Eighth graders	Percent
Asian total	100.0%
English language proficiency	
Low	4.2
Moderate	29.3
High	66.5
Home language proficiency	
Low	58.6
Moderate	29.6
High	11.7
Hispanic total	100.0%
English language proficiency	
Low	3.9
Moderate	31.8
High	64.3
Home language proficiency	
Low	40.8
Moderate	42.8
High	16.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Language Status and Usage Definitions

In addition to reporting on their own language skills, students were also evaluated by their teachers as to whether or not they were language minority and/or limited English proficient. For each student participating in the survey, two of the student's teachers were also selected to participate. Among other questions, teachers were asked to evaluate each student as Language Minority (LM) and as Limited English Proficient (LEP). Teachers were asked to base their evaluations on the following definitions:

> Language Minority (LM): A student in whose home a non-English language is typically spoken. Such students may include those whose English is fluent enough to benefit from instruction in academic subjects offered in English as well as students whose English proficiency is limited.

> Limited English Proficient (LEP): A student whose native language is other than English and whose skills in listening to, speaking, reading, or writing English are such that he/she derives little benefit from school instruction in English.[14]

Students were placed in categories of LEP or non-LEP solely according to their teachers' assessments: if at least one teacher defined the student as LEP, the student was defined as LEP. Two different methods were used to describe the students' language minority status. In the first, students were termed LM or non-LM solely according to their own response regarding whether or not a non-English language is spoken in their home. Throughout this report, when referring to the students' LM status, this first method is the definition most often applied. However, for certain sections, a second method of defining LM status was used. For this second method, which uses *recognized* and *nonrecognized* before *LM* and *non-LM*, teacher responses were combined with student responses. If at least one teacher defined the student as LM and the student indicated that a non-English language was spoken in the home, the student was defined as recognized LM. Conversely, if neither teacher defined the student as LM and the student indicated that the home was monolingual, the student was defined as recognized non-LM. However, in a number of cases, neither teacher defined the student as LM, yet the student indicated that a second language was spoken in the home. These students were placed in a nonrecognized LM status category. In a smaller number of cases, at least one teacher defined the student as language minority, but the student indicated that no language other than English was spoken in the home. These students were also placed in the nonrecognized LM status category. These categorizations are discussed in more detail in chapters 2 and 3.

One other measure that relates to the students' linguistic ability and performance is that of language usage. Students who responded that they came from a bilingual home were asked how often the non-English language was spoken in several situations. Among the situations presented were "How often do you speak that language to your father? How often does your father speak that language to you? How often do your brothers or sisters speak that language to you? How often do you speak that language with your best friends in your neighborhood?" For each situation, the student was asked to respond in one of five ways: "always or most of the time, about half the time, sometimes, never, or does not apply." The answers to eight of these situational questions were combined into a mean score, and students were assigned to either a low-, moderate-, or high-usage frequency category.[15]

Because some variables (such as ethnicity or educational expectations) correspond to all Hispanic or Asian students, and others (such as language proficiency or usage) correspond only to the Hispanic or Asian language minority students, the sample sizes upon which the statistics are based may change within a table. Appendix B contains tables that display the sample sizes and response rates of the various subgroups of students for selected variables.

Ethnic Subgroups

After defining themselves as Asians or Hispanics, students were asked which specific ethnic group best categorized their background. Students were first asked to identify which racial category best described them (choosing from Asian or Pacific Islander; Hispanic, regardless of race; Black, not of Hispanic origin; White, not of Hispanic origin; or American Indian or Alaskan Native). If *Asian or Pacific Islander* were chosen, the student was then directed to the next questionnaire item that asked them to specify their background, choosing from the various

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[14]U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Teacher" survey.

[15]To examine the exact wording of the questions, see appendix A. For a more detailed explanation of this composite, see appendix B.

subcategories listed in Table 1.2. Similarly, if *Hispanic* were chosen by the student as the best description, the student was then directed to choose from more specific background subcategories. While the set of Asian subclassifications are different from current Office of Management and Budget (OMB) standards, they are consistent with past longitudinal studies. The exact wording and choices presented to the students are duplicated in appendix A.

Table 1.2—Percentage of 1988 Asian and Hispanic eighth graders, by ethnicity

Ethnicity	Unweighted frequency	Weighted percent
Asian Total	1,505	100.0%
Chinese	309	17.4
Filipino	288	20.2
Japanese	92	6.0
Korean	188	11.0
Southeast Asian (Vietnamese, Laotian, Cambodian/Kampuchean, Thai, etc.)	240	12.7
Pacific Islander (Somoan, Guamanian, etc.)	99	8.8
South Asian (Asian Indian, Pakistani, Bangladeshi, Sri Lankan, etc.)	126	8.7
Other Asian* West Asian (Iranian, Afghan, Turkish, etc.) Middle Eastern (Iraqi, Israeli, Lebanese, etc.) Other Asian	163	15.3
Hispanic Total	3,129	100.0%
Mexican, Mexican-American, Chicano	1,945	62.2
Cuban	131	3.7
Puerto Rican	373	11.2
Other Hispanic	680	22.9

* West Asians and Middle Easterners were included with "other" Asians in this study because of the small number of students in these categories.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

The socioeconomic status (SES) among ethnic subgroups sometimes varied. For example, while only 7 percent of the Koreans were in the lowest 25 percent of socioeconomic status, 40 percent of the Southeast Asians fell within that quartile. Throughout this report, the estimates for all ethnic subgroups have been adjusted for socioeconomic status; consequently, the differences among the ethnic subgroups are not attributable to differences in socioeconomic status.

Adjustment Procedure

An initial examination of the data led to the finding that socioeconomic status bore a relationship to many of the other variables of interest as well. Because this study is based on bivariate analyses, it was important to try to control, or adjust, for the effects of socioeconomic status when looking at relationships between two other variables (such as ethnicity and the student's English proficiency) so that the relationships found were not confounded by the underlying differences in socioeconomic status. The adjustment procedure uses the socioeconomic distribution for each variable being studied, factoring out the differences attributable to socioeconomic status.

The adjustment procedure is best described using real data; this example is an estimate used in chapter 3. Of the Hispanic eighth graders in 1988, 64.30 percent had a high self-assessed English proficiency. One question of interest is whether differences exist between Mexican, Cuban, and Puerto Rican students' English proficiencies. Having looked at how differences in socioeconomic status affect students' assessments of their English language skills, and having observed Mexican, Cuban, and Puerto Rican students' dissimilar SES backgrounds, an additional question arises of whether the socioeconomic backgrounds of the students might obscure (or exaggerate) the relationship between ethnicity and English proficiency. To remove the differences due to socioeconomic status in order to look more simply at the relationship between ethnicity and English proficiency, the estimates are subjected to an adjustment procedure.

Before adjusting for SES, 62.51 percent of the Mexican students, 65.82 percent of the Cuban students, and 69.33 percent of the Puerto Rican students had a high self-assessed English proficiency. Examining proficiency by socioeconomic status yields the following: 55.60 percent of low SES students had a high English proficiency; 72.61 percent of middle SES students had a high English proficiency; and 83.33 percent of high SES students had a high English proficiency. After adjusting for SES, the estimates of highly English proficient students by ethnicity change somewhat: 64.20 percent of Mexican students, 59.13 percent of Cuban students, and 68.73 percent of Puerto Rican students had a high self-assessed English proficiency. The effect of the adjustment procedure is to remove all the variation attributable to differences in the mean values of the adjustment variable (SES). The proportion of highly proficient Cuban students is exaggerated because the Cuban students, on average, have a higher socioeconomic status than the other two student populations. The adjustment procedure places a statistical control for family socioeconomic status and makes it easier to consider the ethnicity variable without forming deeply stratified tables by SES.

Achievement Tests and Performance Levels

Each student participating in the study was also asked to complete a battery of achievement tests, which included the subject areas of mathematics, reading comprehension, science, and U.S. history/citizenship. Only the results of the mathematics and reading comprehension tests were used for this report. The tests were developed by the Educational Testing Service (ETS) specifically for the NELS:88 survey. The ETS report, *Psychometric Report for the NELS:88 Base-Year Test Battery* (1989), discusses the properties of the test battery and item reliabilities. This report can be obtained from NCES.

The items and scores on the math and reading tests are behaviorally anchored. That is, they were designed so that the test result, in addition to being reported as a simple number that could be compared with other students' scores, could also be reported as a performance level, indicating a student's proficiency at performing particular skills.

For the reading comprehension test, students could score within three possible performance levels: basic, advanced, or below basic. At the basic reading level, students are able to recall details and identify the author's main thought. At the advanced reading level, students have mastered the basic skills, can make further inferences about the reading material, and can understand or evaluate relatively abstract concepts. Students who perform below the basic reading level are not able to accomplish any of the reading comprehension tasks in the higher two levels.

Similarly, the mathematics test results were categorized into four performance levels: basic, intermediate, advanced, and below basic. At the basic math level, a student can perform arithmetic operations (addition, subtraction, multiplication, and division) on whole numbers. At the intermediate level, a student can also carry out operations with decimals, fractions, percentages, and roots. At the advanced level, students are capable of performing these intermediate tasks and can also perform problem-solving tasks, including geometry and simple equations. Students performing below the basic level have not mastered any of the skills in the previous three levels.

When examining the relationship between background and language characteristics and achievement, the profiled students are those who were not able to perform at the basic reading and/or math levels. These students are of grave concern because they are most at risk of future educational failure.

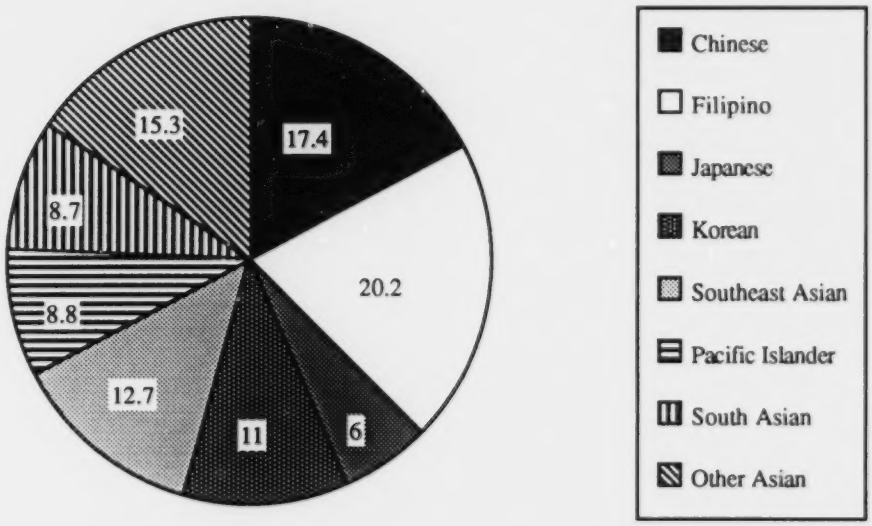
Chapter 2

Profile and Findings
Asian/Pacific Islander Eighth Graders

Asian Ethnic Groups

The Asian students in NELS:88 represent a wide spectrum of ethnic peoples. About one-fifth (17 percent) are Chinese and another one-fifth (20 percent) are Filipino (figure 2.1). Slightly more than one-tenth (13 percent) are Southeast Asian, and another one-tenth (11 percent) are Korean. Pacific Islanders and the South Asians represent the next largest ethnic groups, with 9 percent each, followed by the Japanese, who make up 6 percent of the eighth-grade population. The rest of the students (15 percent) make up an "other" category that includes West Asian and Middle Eastern students.

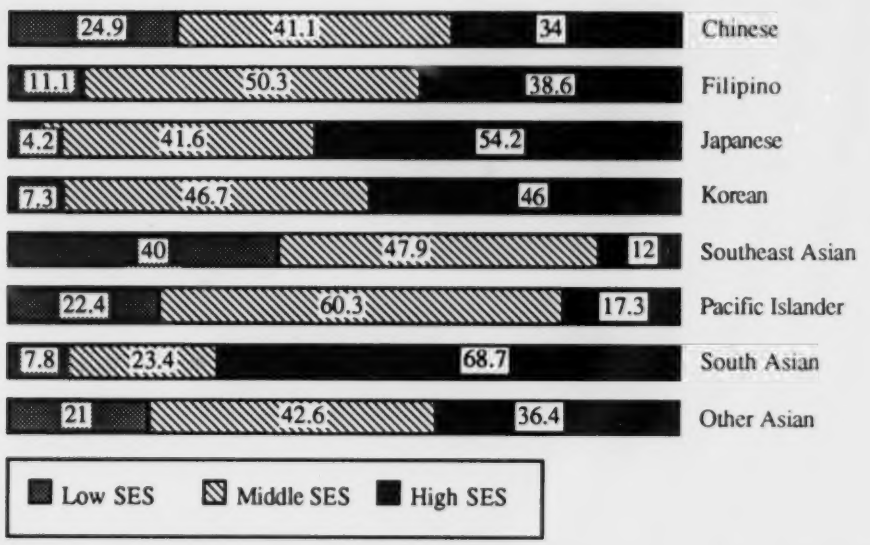
Figure 2.1—Percentage of 1988 Asian eighth graders, by ethnicity



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

The various ethnic groups within the 1988 Asian eighth-grade student population have different distributions in terms of socioeconomic status. Forty percent of the Southeast Asian students are in the lowest socioeconomic quartile, while only 12 percent are in the highest quartile (figure 2.2). The majority of the South Asian students, by contrast, are of high socioeconomic status, with 69 percent of the students in the highest SES quartile. Because of the differences in socioeconomic status among the different ethnic groups, the estimates for ethnic groups throughout this report have been adjusted to control for SES. In addition, some variables other than ethnicity have been adjusted for SES, and the reader will be alerted when these adjusted estimates are used.[16]

Figure 2.2—Percentage of 1988 Asian eighth graders with various SES levels, by ethnicity



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

[16]The effect of the adjustment procedure is simply that differences among students of different ethnic groups (or the appropriate adjusted variable) are not attributable to differences in SES. A brief description of the process has been included in chapter 1 and in appendix B.

Asian eighth graders are no more likely to be native-born than they are to be foreign-born. Fifty-two percent of these students were born in the United States, while 48 percent were born outside of the country (table 2.1). When breaking down the Asian population by ethnicity, the Pacific Islander students are more likely than students of all other ethnic groups (with the exception of the Japanese) to be native-born (86 percent of the Pacific Islander students are U.S. natives), while Southeast Asian students are far more likely to have been foreign-born (85 percent).[17]

Table 2.1—Adjusted percentage of 1988 native- and foreign-born Asian eighth graders, by ethnicity*

	Native-born	Foreign-born
Total	52.4	47.6
Ethnic subgroups (adjusted for SES)		
Pacific Islander	85.6	14.6
Japanese	69.1	31.0
Other Asian	67.0	33.1
Chinese	54.3	45.9
Filipino	52.0	48.2
South Asian	45.5	54.6
Korean	35.1	65.0
Southeast Asian	15.3	84.9

* Classification estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Although the eighth-grade students could not be disaggregated into genealogical generations, an attempt was made to divide students into generations using the students' and parents' places of birth. In this scheme, *first generation* refers to a student who was born in another country and who then immigrated to the United States. On the other hand, a *second generation* student is one who was born in the United States, but who has one or both parents who are foreign-born. *Third generation* students are U.S.-born, from U.S.-born parents. These definitions, of course, may include many genealogical generations within the third generation. As displayed in table 2.2, almost one-half (48 percent) of Asian eighth graders are first generation, while slightly less than one-third (31 percent) are second generation.

[17]The differences in percentages of native-born Pacific Islander and Japanese students, although large, are not statistically significant.

Table 2.2—Percentage of 1988 Asian eighth graders, by generation

	Percent
Total	100.0
First generation	48.1
Second generation	30.7
Third generation or higher	21.2

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Parent" survey.

Language Skills of Asian Eighth Graders

Home language proficiency

About 73 percent of the Asian eighth graders come from homes in which a non-English language is spoken, and who are therefore described as *language minority* (LM).[18] A significant majority (84 percent) of the foreign-born Asian students are LM, and more than one-half (60 percent) of the native-born Asian students are LM as well (table 2.3). The Pacific Islander students are less likely to be LM than students of other ethnicities.[19] Only 39 percent of the Pacific Islander students come from a home where a non-English language is spoken.[20]

[18]Students were asked "Is any language other than English spoken in your home?" Although their ability to speak in the non-English language may be quite limited, exposure to this language has, at the very least, made these students more bilingual than those who come from monolingual households.

[19]As seen in the table, the percentage of "Other Asian" students who are LM falls between the percentages of Pacific Islander and Japanese students who are LM. However, the small number of these students prevents the difference between them and students of other ethnicities from being statistically significant.

[20]The difference between the percentages of Japanese and Korean students who are LM is not statistically significant.

Table 2.3—Unadjusted and adjusted percentage of 1988 Asian non-LM and LM eighth graders, by nativity and ethnicity*

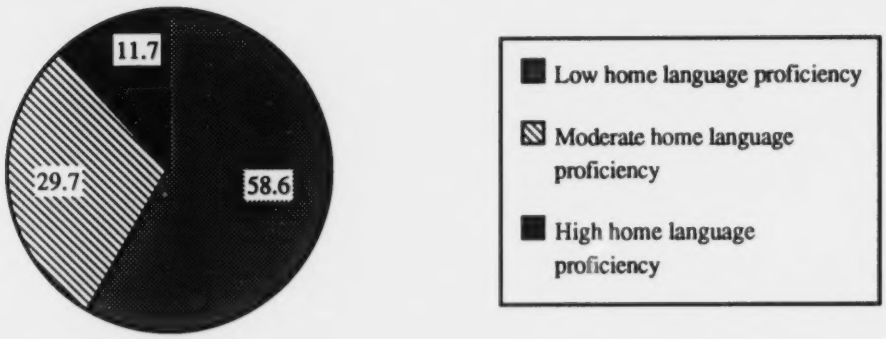
	Non-LM	LM
Total	27.2	72.8
Student's nativity (unadjusted)		
Native-born	40.5	59.5
Foreign-born	15.9	84.1
Ethnic subgroups (adjusted for SES)		
Southeast Asian	12.5	87.5
Chinese	14.3	85.7
Filipino	16.6	83.4
South Asian	17.7	82.3
Korean	27.8	72.2
Japanese	36.9	63.1
Other Asian	45.0	55.0
Pacific Islander	61.0	39.0

* Estimates for the indicated classification have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Even though most Asian students are language minorities, the majority of these students indicate that they are not very proficient in their home language. Only 12 percent indicate that they are highly proficient in that language, while 88 percent indicate that they have only a low or moderate proficiency (figure 2.3).

Figure 2.3—Percentage of 1988 Asian LM eighth graders, by level of self-reported home language proficiency



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

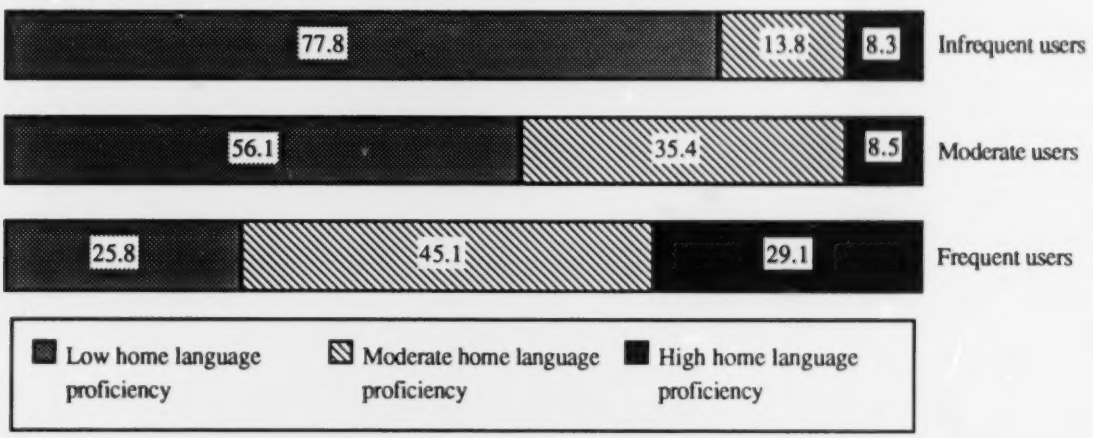
The majority (51 percent) of the Asian students use their home language with only moderate frequency, and only 14 percent indicate that they frequently use their home language (figure 2.4). Students who use their home language more frequently indicate a higher home language proficiency; however, even among the most frequent users of a non-English language, less than one-third report that they possess a high proficiency (figure 2.5). This relationship holds even after controlling for SES. Some researchers have found that bilingual children consistently underrate their ability to communicate in their home language, because they have been frequently corrected by their parents as to the proper form and style of their language.[21] Part of the problem arises when students attempt to translate English words that have no literal equivalent in their home language. Even though students may use this "made up" word in a grammatically correct manner, their elders may interpret this usage as improper.

[21]Personal conversation with Dr. Guadelupe Valdes, Professor of Education at University of California, Berkeley.

Figure 2.4—Percentage of 1988 Asian LM eighth graders, by frequency of home language usage

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Study of 1988: "Base-Year Student" survey.

Figure 2.5—Adjusted percentage of 1988 Asian LM eighth graders with various levels of self-reported home language proficiency, by frequency of usage*



* Estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

The Filipino students are more likely to report that they are highly proficient in their home language, when compared to Southeast Asian, Chinese, and South Asian students. Nineteen percent of the Filipino students indicate a high home language proficiency (table 2.4). By contrast, 8 percent of the Southeast Asian, 7 percent of the Chinese, and 3 percent of the South Asian students report a high home language proficiency. The percentage of students of other ethnicities who report a high home language proficiency fall in between these extremes, and are not significantly different from each other or from the five ethnic groups mentioned above.

Table 2.4—Adjusted percentage of 1988 Asian LM eighth graders with various levels of self-reported home language proficiency, by ethnicity*

	Home language proficiency		
	Low	Moderate	High
Total	58.6	29.7	11.7
Ethnic subgroups (adjusted for SES)			
Japanese	41.6	35.3	23.1
Filipino	53.3	27.7	19.0
Other Asian	50.7	33.5	15.9
Pacific Islander	57.1	28.8	14.0
Korean	61.9	28.3	9.8
Southeast Asian	65.0	27.4	7.6
Chinese	61.0	32.2	6.8
South Asian	73.8	22.4	3.8

* Classification estimates have been adjusted for SES.

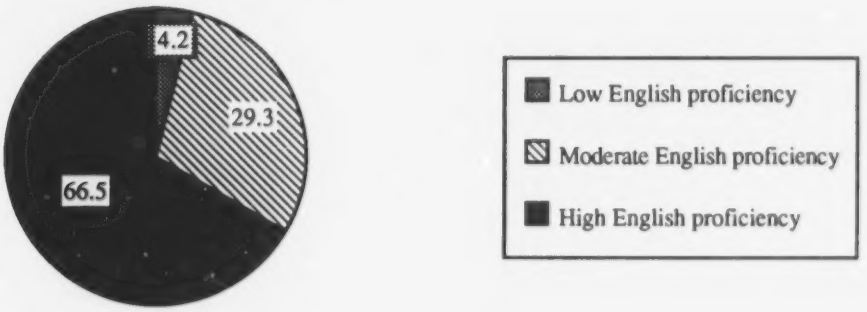
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

English language proficiency

Regardless of their ethnicity, the majority of the Asian LM students (66 percent) indicate that they have a relatively high English proficiency (figure 2.6). Additionally, 29 percent report a moderate English proficiency, while only 4 percent indicate a low English proficiency.

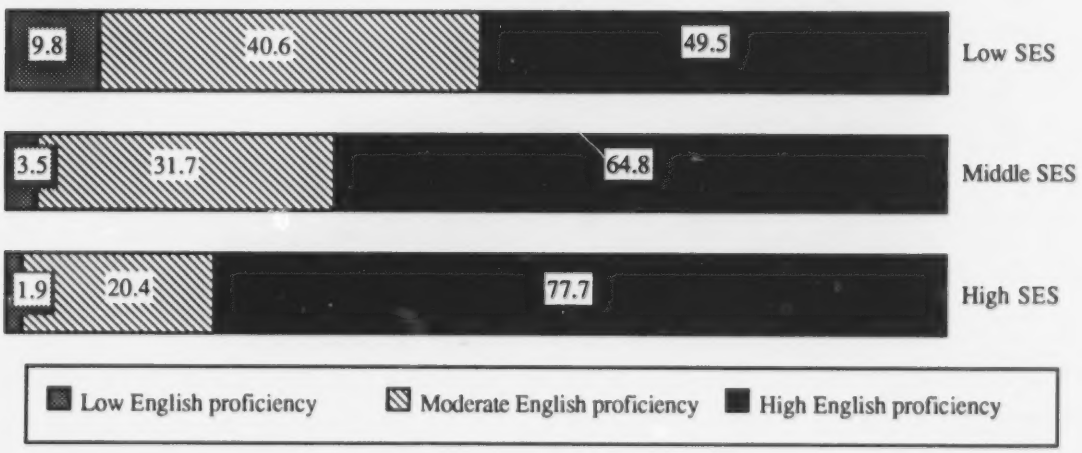
Socioeconomic status appears to be directly related to English language proficiency. That is, as SES increases, the percentage of Asian LM students with a higher English proficiency increases as well. For instance, 78 percent of high SES students report a high English proficiency, while only 50 percent of the low SES students indicate being highly English proficient (figure 2.7). Similarly, while 2 percent of the high SES students indicate a low English proficiency, about 10 percent of the low SES students report a low proficiency. Among Asian students, there is no evidence of a relationship between SES and home language proficiency.

Figure 2.6—Percentage of 1988 Asian LM eighth graders, by self-reported English language proficiency



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Figure 2.7—Percentage of 1988 Asian LM eighth graders with various levels of self-reported English language proficiency, by SES



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Even after adjusting for socioeconomic status, Asian LM students from the various ethnic groups have different assessments of their English language proficiency. The Korean and South Asian students are more likely to indicate a high proficiency while Chinese and Southeast Asian students are less likely to do so. Specifically, 75 percent of the Korean students and 78 percent of the South Asian students indicate a high English proficiency (table 2.5). By contrast, only 59 percent of the Chinese and 56 percent of the Southeast Asian students report a high English proficiency. Fifty-eight percent of the Japanese students report a high English proficiency, but too few were sampled to establish a statistically significant difference. Students of other ethnicities fall in between these extremes and the differences in their percentages are not statistically significant, no matter with whom they are compared.

Table 2.5—Adjusted and unadjusted percentage of 1988 Asian LM eighth graders with various levels of self-reported English language proficiency, by ethnicity and self-reported home language proficiency*

	English language proficiency		
	Low	Moderate	High
Total	4.2	29.3	66.5
Ethnic subgroups (adjusted for SES)			
South Asian	1.4	20.4	78.1
Korean	3.0	21.7	75.3
Pacific Islander	2.0	24.8	73.2
Other Asian	1.9	25.4	72.7
Filipino	1.0	31.2	68.0
Chinese	6.6	34.2	59.2
Japanese	8.9	32.6	58.5
Southeast Asian	8.8	34.7	56.5
Home language proficiency (unadjusted)			
Low	3.0	26.4	70.6
Moderate	6.3	37.7	56.0
High	5.1	22.2	72.7

* Estimates for the indicated classification have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Relationship between English and home language proficiency

Asian students with a low home language proficiency assess their English proficiency similarly to those with a high home language proficiency. Almost three-fourths of these students indicate a high English proficiency, and about one-fourth indicate a moderate English proficiency (table 2.5). On the other hand, Asian students who are moderately proficient in their home language are less likely than those with a high or low proficiency to assess their English proficiency at the highest level. In particular, 56 percent of the students with a moderate home language proficiency have a high English proficiency, and 38 percent of these students indicate a moderate English proficiency. However, 71 percent of the students with a low home language proficiency and 73 percent with a high home language proficiency report being highly proficient in English. The differences among those students with varying home language proficiencies who have a low English proficiency are not statistically significant.

Although the relationship between English and home language proficiency at first glance seems a bit unusual, it has been noticed elsewhere. As debate on the subject continues, many experts of linguistics ascribe to theories of *additive* and *subtractive* bilingualism.[22] An example of additive bilingualism would be the learning of a second language by a person already proficient in the culturally dominant language. However, subtractive bilingualism is more often experienced by ethnic minorities when their home language is replaced by the more "prestigious" national language of their host country. Cummins has also suggested a threshold hypothesis for language learning that distinguishes between *proficient*, *partial*, and *limited* bilinguals. He theorizes that proficient bilinguals have reached proficiency in both languages; partial bilinguals are in the process of adding, replacing, or subtracting a language and are proficient in one language while limited in another; and limited bilinguals lose proficiency in one language before gaining proficiency in another. Furthermore, Cummins theorizes that limited bilinguals, like Lambert's subtractive bilinguals, may never become proficient in either language.

Relationship between language proficiency, birthplace, and residence in the United States

Asian students who are natives of the United States, not surprisingly, are more highly proficient in English than their foreign-born peers. For example, 80 percent of the native-born students report a high English proficiency, compared with 58 percent of the foreign-born students (figure 2.8). However, as the length of students' residency increases, the percentage indicating a high English proficiency rises as well. Only 31 percent of the Asian students who have resided in the United States for less than six years were highly English proficient, as opposed to about two-thirds of the students who have been here for more than 9 years (figure 2.9). In fact, the percentage of foreign-born students who have resided in the United States for more than 9 years and who are highly proficient in English is not significantly different from the percentage of native-born students with a high English proficiency. (Because of the relationship between English proficiency and SES, the estimates in this section—those conveying the relationships between proficiency and residency—have been adjusted to control for the effects of SES.)

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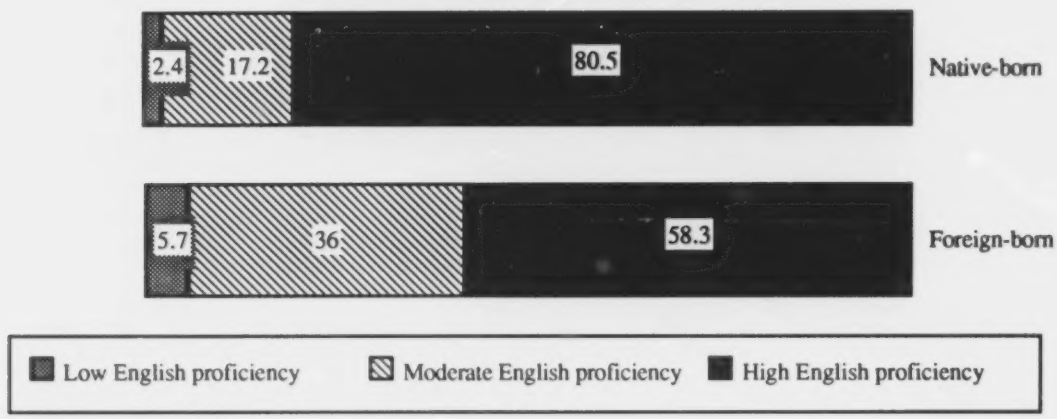
[22]The theories of Lambert and Tucker (1972), Skutnabb-Kangas and Toukomaa (1979), and Cummins (1976, 1978) are reviewed by D.P. Dolson in "Bilingualism and Scholastic Performance: The Literature Revisited," *NABE Journal X* (1985):1–35.

Figure 2.8—Adjusted percentage of 1988 Asian LM eighth graders with various levels of self-reported English language proficiency, by nativity*

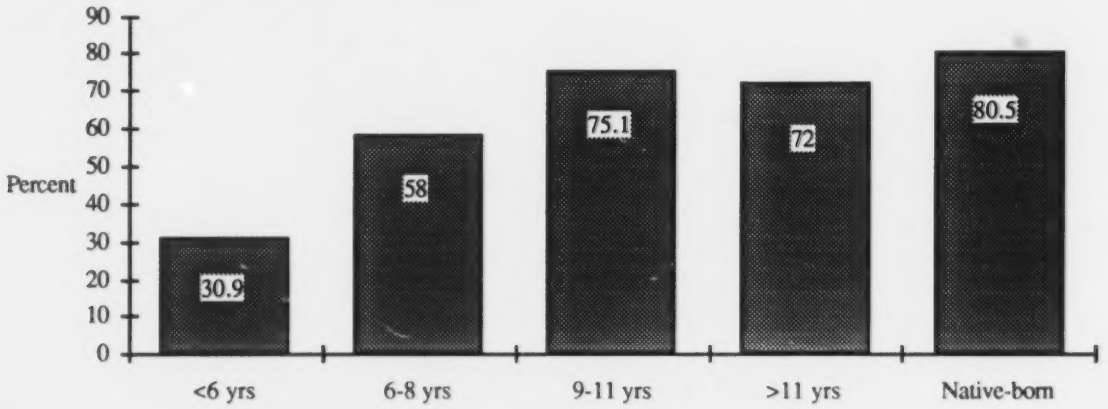


* Estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

A relationship also exists between the home language proficiency of Asian eighth graders and the length of the students' residence in the country. More than 60 percent of both the native and foreign-born Asian LM students have a low home language proficiency, with the exception of foreign-born students who have recently arrived (table 2.6). Only 34 percent of the Asian LM students living in the country for less than six years indicate that they have a low home language proficiency, while one-half report a moderate proficiency. By contrast, more than 60 percent of foreign-born Asian LM students who have resided in the United States longer than six years have a low proficiency, and only 25 percent have a moderate home language proficiency.

Figure 2.9—Adjusted percentage of 1988 Asian LM eighth graders indicating a high English language proficiency, by length of U.S. residence*



* Estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Table 2.6—Adjusted percentage of 1988 Asian LM eighth graders with low and moderate self-reported home language proficiency, by length of U.S. residence*

	Home language proficiency	
	Low	Moderate
Total	58.6	29.6
Student's years in the U.S. (adjusted for SES)		
Less than 6	34.0	50.4
Between 6 and 8	62.5	30.1
Between 9 and 11	68.9	24.8
More than 11	66.7	26.0
Native-born	61.5	23.8

* Classification estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Relationship between parent's and student's language proficiency

A relationship exists between Asian student's and parent's English proficiency, with parents who are more proficient in the English language being more likely to have children who are also highly proficient. For instance, 75 percent of the Asian LM students with a highly proficient parent are also highly proficient in English, compared with 54 percent of the children who have a high proficiency, but whose parents have a low proficiency (table 2.7). Similarly, 24 percent of the students with highly proficient parents have a moderate English proficiency, compared to 36 percent of the students with parents of low proficiency. (These estimates have been adjusted to control for SES.)

Table 2.7—Adjusted percentage of 1988 Asian LM eighth graders with various levels of self-reported English language proficiency, by responding parent's self-reported English language proficiency*

	English language proficiency		
	Low	Moderate	High
Total	4.2	29.3	66.5
Parent's English language proficiency (adjusted for SES)			
Low	9.4	36.2	54.4
Moderate	2.7	28.8	68.5
High	1.6	23.5	74.9

* Classification estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Relationship of Asian Underachievement to Ethnicity and Language Proficiency

Ethnicity

No significant differences could be discerned among the LM students of various Asian ethnic subgroups on the reading or math achievement tests. Although the percentage of students who could not achieve the basic reading level varied from a high of 38 percent for Pacific Islanders to a low of 16 percent for the South Asians, due to small samples, these differences were not significant (table 2.8).

In math achievement, almost half (43 percent) of the Pacific Islander LM students were unable to achieve the basic math level, while South Asian and Southeast Asian LM students had the lowest percentages of their populations unable to achieve the basic math level (16 percent and 15 percent, respectively). Again, however, due to small sample sizes, these differences were not statistically significant.

Table 2.8—Adjusted percentage of 1988 Asian LM eighth graders unable to achieve the basic reading and math achievement levels, by ethnicity and self-reported English language proficiency*

	Reading achievement	Math achievement
Total	24.4	22.8
Ethnicity (adjusted for SES)		
Pacific Islander	37.5	43.1
Other Asian	30.3	24.2
Filipino	28.2	29.3
Japanese	25.2	20.6
Chinese	22.5	21.3
Southeast Asian	20.9	14.7
Korean	19.5	17.6
South Asian	15.9	16.0
English proficiency (adjusted for SES)		
Low	63.1	24.3
Moderate	32.7	24.9
High	18.8	21.8

* Classification estimates have been adjusted for SES.

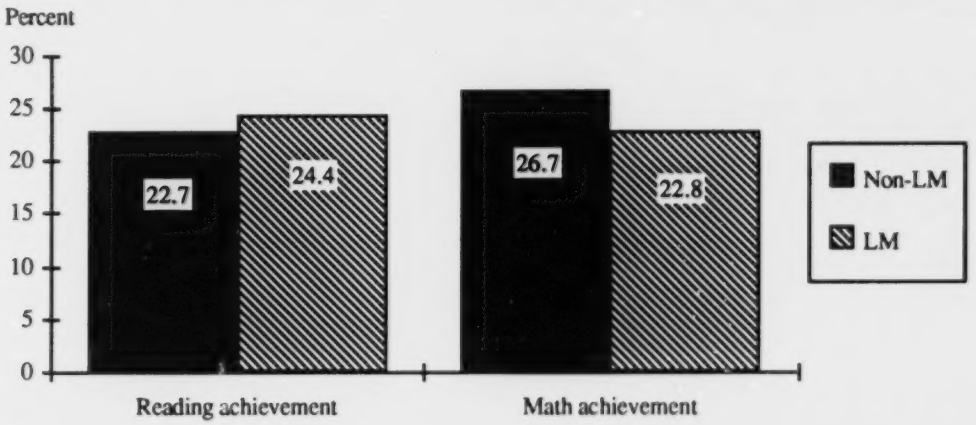
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Language use and proficiency

Overall, the same percentage of Asian non-LM and LM students were unable to achieve the basic level in reading (23 percent and 24 percent, respectively) and in math (27 percent and 23 percent). Even when controlling for socioeconomic status and nativity, this similarity remains (figure 2.10).

However, English proficiency among LM students is related to reading achievement. As English proficiency among the Asian LM students increased, the percentage of those underachieving in reading decreased. Sixty-three percent of the least proficient students failed to reach the basic level of the reading test, while only 19 percent of the highly proficient students were unable to reach that level (table 2.8). The relationship between English proficiency and a failure to achieve the basic math achievement level was not significant among Asian LM students. (Estimates of the relationships between proficiency and underachievement have been adjusted to control for SES.)

Figure 2.10—Percentage of 1988 Asian eighth graders unable to achieve the basic reading and math achievement levels, by LM status



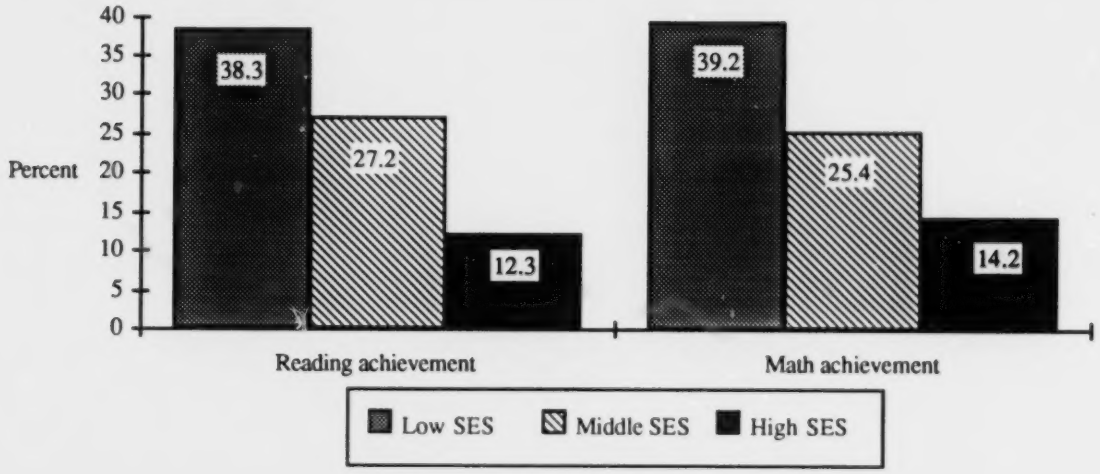
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Socioeconomic status

Greater proportions of Asian students with higher SES achieved above the basic levels on both tests than those with lower SES. Although 12 percent of high SES students could not achieve the basic reading level, more than three times that percentage of low SES students (38 percent) could not reach the basic level (figure 2.11). A similar pattern emerged on the math test: 14 percent of the Asian students with high SES did not achieve the basic level, compared with 39 percent of those with low SES.

The relationship between SES and reading achievement prevails for Asian students even when controlling for English proficiency. In particular, among LM eighth graders with moderate English proficiency, 43 percent of the low SES students failed to achieve the basic reading level, in contrast to 24 percent of high SES students (table 2.9). The same pattern exists for math achievement, where SES has a strong relationship to achievement.

Figure 2.11—Percentage of 1988 Asian eighth graders unable to achieve the basic reading and math achievement levels, by SES



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Table 2.9—Percentage of 1988 Asian LM eighth graders with various SES unable to achieve the basic reading and math achievement levels, by self-reported English language proficiency

	Reading achievement			*Math achievement*		
	Socioeconomic status			Socioeconomic status		
	Low	Middle	High	Low	Middle	High
Total*	38.3	27.2	12.3	39.2	25.4	14.2
English language proficiency						
Low	Low-N	Low-N	Low-N	Low-N	Low-N	Low-N
Moderate	42.7	38.1	23.9	37.5	29.7	13.3
High	30.3	20.5	9.7	38.3	21.6	13.0

* Total estimates incorporate both LM and non-LM students, while estimates in the classification "English language proficiency" apply only to LM students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Teacher Identification of Asian Eighth Graders

Two teachers for each eighth grader included in NELS:88 were also surveyed. Each teacher was asked to indicate whether or not the student was a language minority student (LM) and also whether or not the student had limited English proficiency (LEP).[23] This study combined the two teachers' responses into one "teacher identification"; students were teacher-identified as LM if one of the following occurred: (a) both teachers indicated that a student is LM, (b) only one teacher responded to the question and indicated that the student is LM, or (c) one teacher indicated that the student is LM and the other teacher did not. Thus, if at least one teacher identified the student as LM, the student was teacher-identified as LM. The same processes determined the teacher identification of LEP: if at least one teacher indicated that the student was LEP, the student was teacher-identified as LEP; the description used in this report is non-excluded teacher-identified LEP (NETIL).[24]

In this section, the teachers' evaluations of the eighth grader's LM and LEP status are compared with the students' report of whether or not a second language was spoken in the home and the students' self-reported English language proficiency. The results indicate that teachers and students often have different views of the LM and LEP status of the students.

[23]As explained in the first chapter, in the NELS:88 Base-Year survey, students were excluded if they were thought to not have enough English skills to fill out the survey forms and tests. Therefore, the most limited English proficient students were not included.

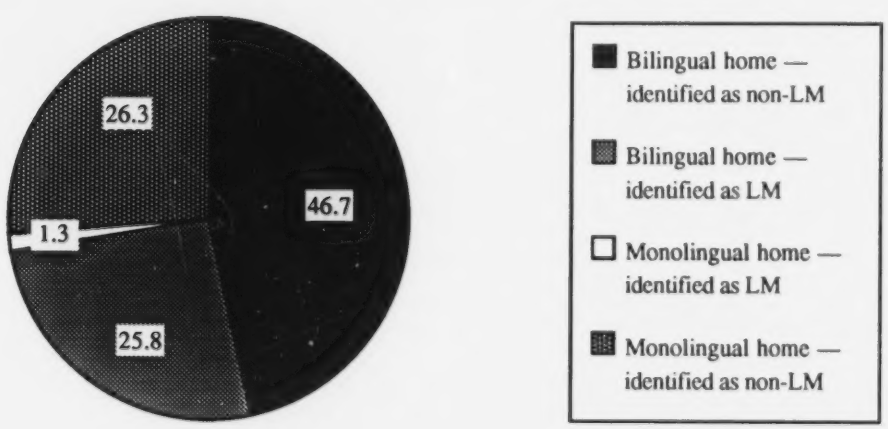
[24]See appendix B for further information about these two variables.

Recognized and nonrecognized language minority students

Approximately 73 percent of Asian students indicate that a non-English language is spoken in the home. However, only 27 percent of Asian students were teacher-identified as being language minority, indicating that many more students are from bilingual homes than teachers are aware (figure 2.12). Most, but not all, of the Asian students who are from monolingual homes were identified by their teachers as not being LM: about 28 percent of Asian students indicate that only English is spoken at home, and all but 1 percent of these students were identified by teachers as *not* being language minority. For this analysis, when students and teachers have a different assessment of whether or not the student is LM, no matter the nature of the disparity, those students were called *nonrecognized language minority* in order to relate a disparity between the student and teacher responses.

Overall, 52 percent of the Asian students were in agreement with their teachers about the student's language minority status (26 percent LM and 26 percent non-LM), while 48 percent disagreed (47 percent were from bilingual homes and teacher-identified as non-LM and 1 percent were from English-only homes and teacher-identified as LM). In order to distinguish between the 73 percent of Asian students who are LM and the 26 percent of Asian students who are not only LM but also teacher-identified as such, the term *recognized LM* is used. Similarly, *recognized non-LM* denotes those non-LM students who were teacher-identified as non-language minority. The remaining students, as noted above, are termed *nonrecognized LM*.

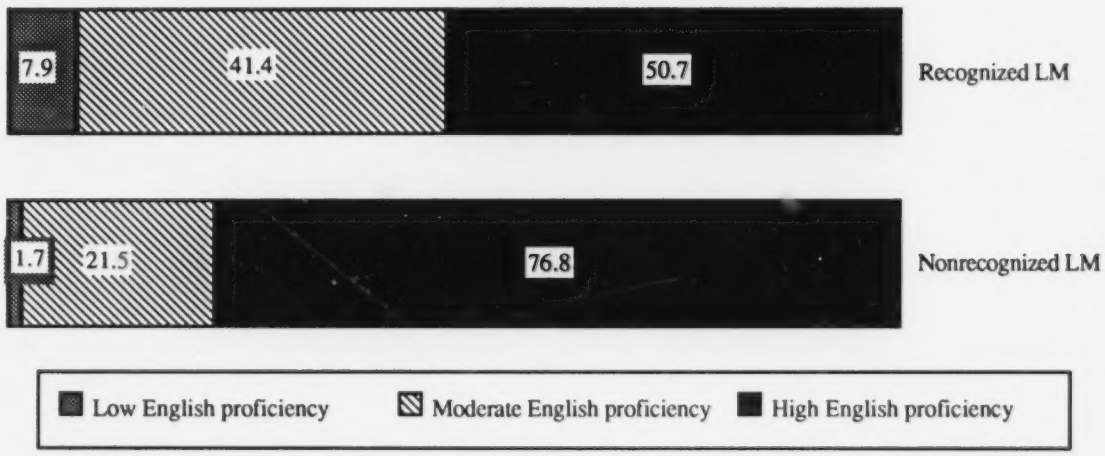
Figure 2.12—Percentage of 1988 Asian eighth graders, by teacher- and student-reported LM status



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

The English language proficiency of the recognized LM Asian students was compared with the proficiency of the nonrecognized LM students. In general, the nonrecognized LM students are more proficient in English than the recognized LM students. For example, 77 percent of the nonrecognized LM students indicate having a high English proficiency, while 51 percent of the recognized LM students report the same proficiency level (figure 2.13). Similarly, only 2 percent of the nonrecognized LM students indicate a low proficiency, as opposed to 8 percent of the recognized LM students.[25]

Figure 2.13—Percentage of 1988 Asian LM eighth graders with various levels of self-reported English language proficiency, by LM recognition



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

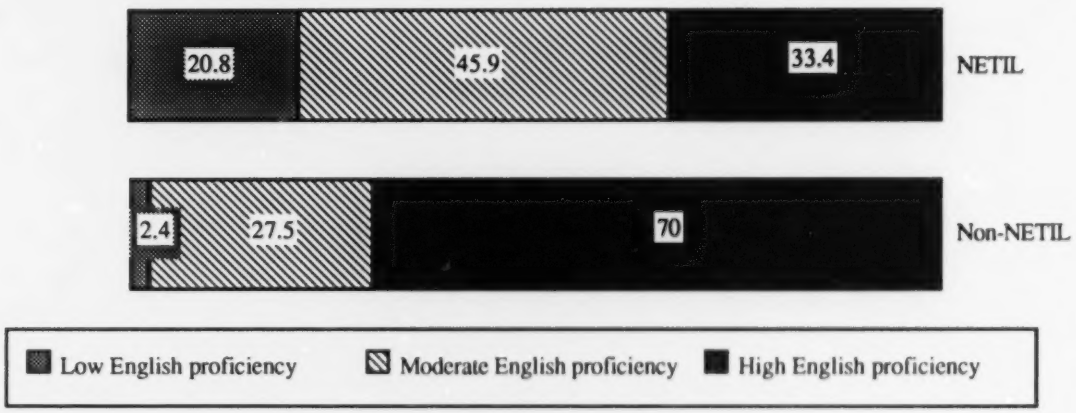
Non-excluded teacher-identified limited English proficient students

About 6 percent of the Asian student body included in the survey were defined by at least one of their teachers as having limited English proficiency. Nevertheless, among these students, 33 percent indicate that they are highly English proficient, and 46 percent indicate a moderate proficiency level (figure 2.14). By comparison, among language minority non-NETIL students, 70 percent consider themselves highly proficient, and 28 percent moderately proficient.

[25]Students who responded that only English was spoken in the home were not asked to assess their language skills. In this instance, therefore, the nonrecognized LM category does not include the 4 percent of students who stated that they came from a monolingual home and whose teachers defined them as LM.

Because the more severely limited English proficient students were excluded from the NELS:88 Base-Year Survey, the degree to which students and teachers disagree about their LEP status is probably overestimated in this study. Nonetheless, a more detailed examination of the differences between students and teacher evaluation of language skills would be of interest, especially in light of the ongoing debate about the effectiveness of bilingual education programs.

Figure 2.14—Percentage of 1988 Asian LM eighth graders with various levels of self-reported English language proficiency, by NETIL status



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

Bilingual instruction

In their first two years of school in the United States, less than 6 percent of the Asian LM students received instruction in a language other than English.[26] Although these estimates apply only to students who come from bilingual homes, both students who were born in the United States and those students who are foreign-born and who may have received education elsewhere are included. Therefore, "first two years of school in the United States" might as easily apply to first and second grade, as to fifth and sixth grade.

Only a small proportion of Asian LM eighth graders received bilingual instruction during their first two years of American schooling. About 6 percent of students were taught language arts (literature, reading, or writing) in a non-English language, and 5 percent received instruction in mathematics in another language (table 2.10). In addition, 5 percent received bilingual instruction in other subjects (science, U.S. History, government, or social studies).

[26]Students were not specifically asked whether these subjects were taught in their native languages, but rather if they were taught in English or in a language other than English. A third possible response was "subject not taught." See appendix A for more detail on the wording of the question.

Among Asian eighth graders, socioeconomic status is related to bilingual instruction in language arts, but is not related to math or other subject instruction. Thirteen percent of the LM students with low SES received bilingual language arts, compared with 4 percent of high SES LM students. Although only language arts instruction seemed related to SES, all subsequent estimates in this section have been adjusted for SES.

Recognized language minority students were more likely than nonrecognized LM students to have received bilingual instruction in math courses. Eight percent of the Asian recognized LM students received bilingual math instruction, whereas 4 percent of the Asian nonrecognized LM students received this instruction. No significant differences could be discerned between the Asian NETIL students and non-NETIL students in relation to bilingual instruction. After adjusting for socioeconomic status, there were no variations among the proportions of students receiving bilingual instruction who had different levels of English proficiency.

Table 2.10—Unadjusted and adjusted percentage of 1988 Asian LM eighth graders receiving instruction in a non-English language during first 2 years of American schooling, by SES and LM status*

	Subjects taught in a non-English language		
	Reading	Math	Other subjects
Total	5.9	5.5	4.6
Socioeconomic status (unadjusted)			
Low	12.8	8.7	8.3
Medium	4.8	4.4	3.3
High	3.5	4.9	4.2
LM status (adjusted for SES)			
Nonrecognized LM	4.5	3.6	2.9
Recognized LM	4.9	8.0	6.7

* Estimates for the indicated classification have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

Language minority students' involvement in language assistance programs

LM students were also asked if they had ever been enrolled in an English language assistance program.[27] Twenty-four percent of the Asian LM students responded that they had been enrolled in such a program. Of those enrolled in these programs, a large proportion (69 percent) had been enrolled in the first, second, or third grades; 40 percent had been enrolled in the fourth, fifth, or sixth grades; and 20 percent had been enrolled in the seventh or eighth grades (table 2.11). Asian LM students with low SES were more likely to have been enrolled in an assistance program than high SES Asian LM students. Specifically, 36 percent of low SES students had been enrolled in such a program, compared with 15 percent of high SES students. Because of this relationship, all subsequent estimates in this section have been adjusted to control for the effect of SES.

Among Asian eighth graders, recognized LM students were more likely to have been enrolled in a language assistance program than nonrecognized LM students (31 percent versus 18 percent). Similarly, Asian NETIL students were more likely than Asian non-NETIL students to have been enrolled in an assistance program (41 percent versus 21 percent). The differences among these groups with regard to when they were enrolled in the programs, although large, are not significant.

As Asian LM students' English proficiency increases, the likelihood of their having attended a language assistance program decreases. For example, 58 percent of the students with a low English proficiency had been enrolled in an assistance program, whereas 36 percent of the moderately proficient and 16 percent of the highly English proficient students had been enrolled. In addition, students with a high English proficiency are more likely than those with a moderate proficiency to have been enrolled in the program during their primary grades. Specifically, 86 percent of the students with high proficiency who attended an assistance program had been enrolled in first, second or third grade, while only 10 percent were enrolled in seventh or eighth grade. By contrast, 59 percent of the students with moderate proficiency had been enrolled in the first through third grades, and 22 percent had been enrolled during the seventh or eighth.

[27]To examine the exact wording of the question, see appendix A.

Table 2.11—Unadjusted and adjusted percentage of 1988 Asian LM eighth graders enrolled in a language assistance program, by SES, LM and NETIL status, and self-reported English language proficiency*

	Ever enrolled in language program	Enrolled in 1st, 2nd, 3rd grd	Enrolled in 4th, 5th, 6th grd	Enrolled in 7th, 8th grd
Total	23.6	68.8	40.7	20.0
Socioeconomic status (unadjusted)				
Low	36.4	82.2	43.2	17.1
Medium	25.3	61.9	42.3	23.8
High	14.6	63.9	34.1	16.3
LM status (adjusted for SES)				
Recognized LM	31.0	66.0	44.8	16.9
Nonrecognized LM	18.4	71.0	32.6	22.7
NETIL status (adjusted for SES)				
NETIL	41.4	54.4	57.0	23.1
Non-NETIL	21.5	71.2	36.8	18.8
English language proficiency (adjusted for SES)				
Low	57.6	Low-N	Low-N	Low-N
Moderate	35.6	59.1	50.2	21.6
High	16.3	85.9	22.0	9.5

* Estimates for the indicated classifications have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

Relationship of Asian Underachievement to Language Status and Bilingual Education

Language identification

For Asian students, both language minority and limited English proficiency teacher-identification is related to reading achievement. Not surprisingly, the same pattern that was observed between language minority status and student-reported English proficiency is also seen between teacher-identified LM status and reading achievement; that is, those students who are recognized as being LM are less proficient in English than those who are LM but who are not recognized as such. On the reading achievement test, Asian recognized LM students failed to achieve the basic reading level at a higher rate (30 percent) than Asian LM students who were not recognized as LM (17 percent). After adjusting for SES, this relationship no longer holds (table 2.12). This relationship is not evident for math achievement.

As expected, Asian NETIL students had a higher rate of underachievement on the reading test (37 percent) than language minority non-NETIL students (20 percent), even after adjusting for SES. The differences between NETIL and non-NETIL students on the math achievement test were not significant.

Table 2.12—Percentage of 1988 Asian LM eighth graders unable to achieve the basic reading achievement level, by LM and NETIL status

	Reading achievement before SES adjustment	Reading achievement after SES adjustment
Total	24.4	24.4
LM status		
Recognized LM	30.4	26.7
Nonrecognized LM	17.4	19.6
NETIL status		
NETIL	41.9	37.3
Non-NETIL	19.8	20.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

Bilingual education

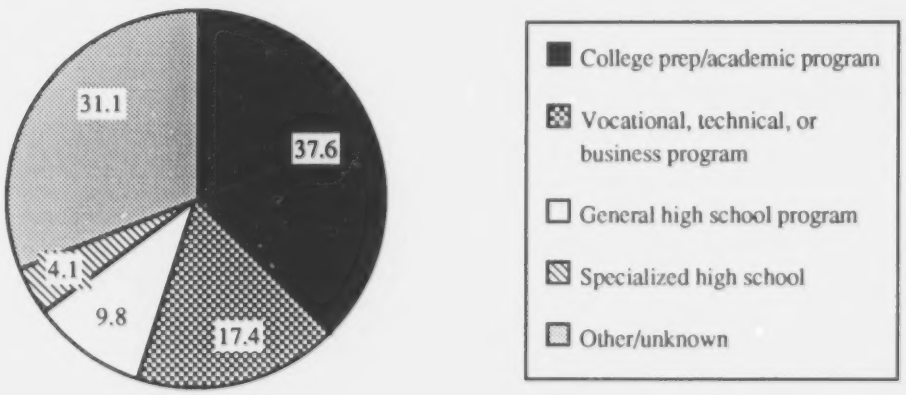
As mentioned earlier, very few Asian students received bilingual education during their first two years of American schooling (6 percent). Comparing achievement rates of students who received bilingual education with those who did not would be inappropriate because the numbers are too small to make these comparisons while holding English proficiency constant.

Educational Aspirations of Asian Eighth Graders

High school plans

Thirty-eight percent of Asian eighth graders plan to enroll in an academic program during their high school years, while 17 percent plan to enroll in a vocational program (figure 2.15). Ten percent of the students indicate that they will enroll in a general program whereas 4 percent look forward to attending a specialized high school (such as a fine arts school). The remaining proportion (31 percent) do not know what type of high school program they will enter or have other plans.

Figure 2.15—Percentage of 1988 Asian eighth graders, by intended high school program



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Socioeconomic status bears a relationship to the Asian students' choice of high school program. For example, 48 percent of high SES students intend to enroll in an academic program, as opposed to 25 percent of low SES students (table 2.13). In addition, a smaller percentage of high SES students (27 percent) are unsure of what type of program they will select in high school (or have other plans) than low SES students (38 percent).

Even after adjusting for SES, there are some differences among the percentages of students of different ethnic groups intending to enroll in an academic program. Filipino and Pacific Islander students are less likely to intend to enroll in an academic program when compared to South Asian students. For example, about 30 percent of the Filipino and 26 percent of the Pacific Islander

students intend to take college preparatory courses, compared with about 50 percent of the South Asian students. Although a similar proportion of Japanese students (48 percent) as South Asian students intend to enroll in an academic program, too few Japanese students were included to establish statistical significance. The percentages of students of other ethnicities intending to enroll in an academic program fall between the high and low extremes, with no statistically significant differences.

Table 2.13—Unadjusted and adjusted percentage of 1988 Asian eighth graders planning to enroll in various high school programs, by SES, ethnicity, and self-reported English language proficiency*

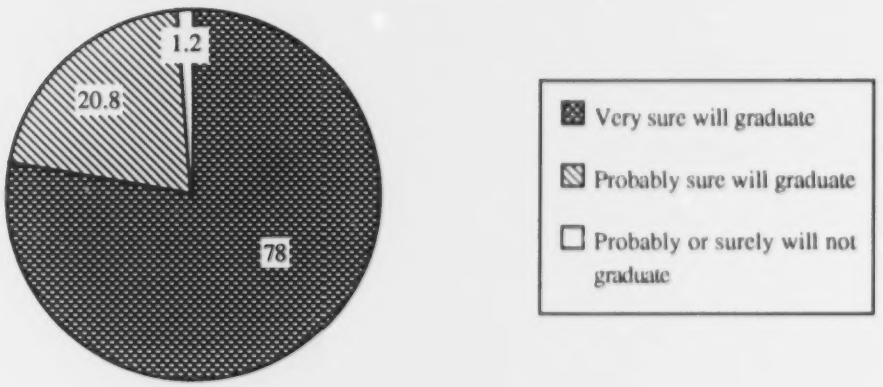
	Plan to enroll in				Unknown or other plans
	Academic program	Vocational program	General program	Specialized program	
Total	37.6	17.4	9.9	4.1	31.1
Socioeconomic status (unadjusted)					
Low	24.9	25.9	8.1	3.5	37.7
Middle	34.4	19.6	9.3	5.1	31.5
High	48.3	10.2	11.2	3.2	27.0
Ethnic groups (adjusted for SES)					
Korean	49.4	11.6	17.0	6.0	22.5
Japanese	48.0	11.2	8.7	7.9	24.9
South Asian	46.8	20.4	7.1	2.2	23.1
Southeast Asian	43.1	14.5	4.0	2.3	35.8
Chinese	40.5	18.1	8.5	3.9	29.0
Other Asian	29.9	17.4	13.4	4.4	32.7
Filipino	29.8	22.8	9.7	3.4	34.1
Pacific Islander	26.4	16.8	13.7	3.1	41.8
English proficiency (adjusted for SES)					
Low	24.4	6.1	3.5	4.5	56.5
Moderate	32.5	19.6	13.7	2.3	33.0
High	44.5	15.4	8.9	4.1	27.4

* Estimates for the indicated classifications have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Socioeconomic status, in addition to being related to intended high school program, is also related to the Asian students' confidence in their graduating from high school. Overall, the majority of the Asian students (78 percent) are "very sure I'll graduate" from high school (figure 2.16). Twenty-one percent indicate "I'll probably graduate" and one percent report they probably or surely will not graduate from high school.[28] Although the majority of all three socioeconomic classes are very sure of their graduation, the size of that majority increases as SES increases. For instance, while 68 percent of low SES students are very sure of their graduation, 76 percent of medium SES and 86 percent of high SES students believe similarly (table 2.14).

Figure 2.16—Percentage of 1988 Asian eighth graders, by confidence in high school graduation



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

The South and Southeast Asians are very sure of their graduation from high school, particularly in comparison with Filipino and Pacific Islander students. Specifically, 88 percent and 87 percent, respectively, of South and Southeast Asian students feel very sure of their graduation, while 72 percent and 67 percent, respectively, of Filipino and Pacific Islander students are that confident of their high school graduation. Although the percentage of Japanese students who are very confident of their graduation (72 percent) is similar to the percentage of Filipino and Pacific Islander students, too few Japanese students were sampled to establish statistical significance. Students of other ethnicities fall within those percentages and their differences are not statistically significant.

[28]To examine the exact wording of questions used in this section, see appendix A.

Table 2.14—Unadjusted and adjusted percentage of 1988 Asian eighth graders with various levels of confidence in their HS graduation, by SES, ethnicity, self-reported English language proficiency, and NETIL status*

	Very sure will graduate	Probably sure will graduate
Total	78.1	20.8
Socioeconomic status (unadjusted)		
Low	67.5	29.1
Medium	76.4	22.9
High	85.8	13.7
Ethnic groups (adjusted for SES)		
South Asian	88.5	11.1
Southeast Asian	86.7	13.6
Korean	86.2	13.5
Other Asian	79.5	20.5
Chinese	75.6	20.6
Filipino	72.0	27.2
Japanese	71.7	27.8
Pacific Islander	67.4	30.6
English language proficiency (adjusted for SES)		
Low	60.1	30.2
Moderate	68.7	30.5
High	83.2	15.8
NETIL status (adjusted for SES)		
NETIL	59.9	36.2
Non-NETIL	79.2	19.8

* Estimates for the indicated classifications have been adjusted for SES.

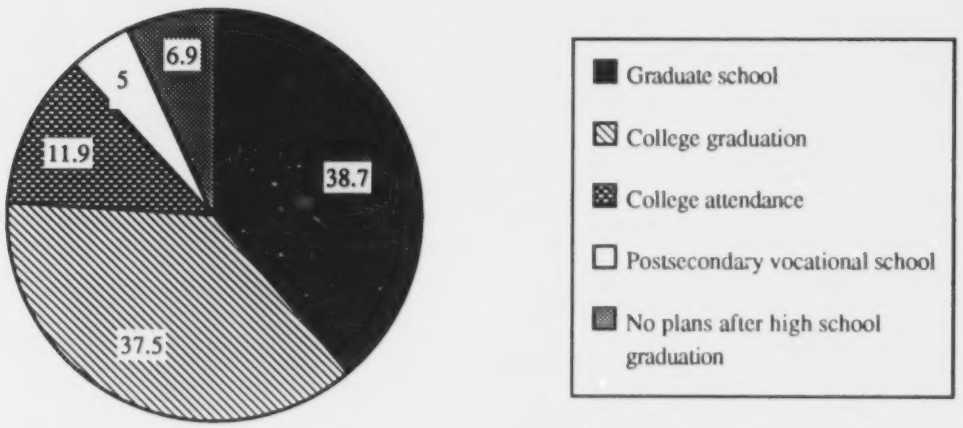
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

Future educational plans

Eighty-eight percent of Asian eighth graders plan to attend college (figure 2.17). Within this group, nearly equal proportions plan on stopping after attaining a bachelor's degree versus continuing on to graduate school (39 percent versus 38 percent of Asian eighth graders). In addition, 5 percent plan to attend a vocational or business school after high school. Only 7 percent

of the students intend to graduate from high school with no plans for post-secondary education.[29] Socioeconomic status, again, is related to Asian students' educational plans. For example, 56 percent of high SES students intend to pursue an advanced degree after college, while only 2 percent have no plans for further education after high school (table 2.15). By contrast, only 19 percent of low SES students intend to pursue an advanced degree, and 13 percent have no educational plans after their high school graduation. Because SES is related to student's high school plans, confidence in high school graduation and future educational plans, all subsequent estimates in this section have been adjusted to control for SES.

Figure 2.17—Percentage of 1988 Asian eighth graders, by plans for further education



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Even after controlling for SES, some differences appear between the various Asian ethnic groups. Filipino and Pacific Islander students are less likely than students of most other ethnicities to plan on attaining an advanced degree (28 percent and 21 percent, respectively).[30] In sharp contrast, for example, the majority of the Korean students (56 percent) have an advanced degree as their goal. The Pacific Islander students are more likely than students of all other ethnicities to discontinue their education after high school (22 percent have no educational plans for after high school); however, the difference between the Pacific Islander and Japanese students is not statistically significant.

[29]Students were asked, "As things stand now, how far in school do you think you will get?"

[30]The percentages of Filipino and Pacific Islander students planning to attain an advanced degree is statistically different from those of the Korean, South Asian, Southeast Asian, and Chinese students, but not different from those of Japanese and Other Asian students.

Table 2.15—Unadjusted and adjusted percentage of 1988 Asian eighth graders with plans to attain an advanced degree or with no educational plans after HS, by SES, ethnicity, and LM status*

	Plan to attain an advanced degree	No plans for further education after HS
Total	38.7	6.9
Socioeconomic status (unadjusted)		
Low	19.0	12.7
Medium	32.9	8.2
High	56.3	2.1
Ethnic groups (adjusted for SES)		
Korean	55.9	2.2
South Asian	52.5	3.2
Southeast Asian	42.2	5.2
Chinese	45.8	5.1
Other Asian	36.2	6.0
Japanese	32.5	11.1
Filipino	27.6	7.2
Pacific Islander	21.1	22.2
LM status (adjusted for SES)		
Recognized LM	38.7	3.5
Nonrecognized LM	44.9	5.8
Recognized non-LM	28.1	11.9

* Estimates for the indicated classifications have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

High school plans of LM students

English language proficiency is related to students' decisions regarding high school even after controlling for SES. Asian students with high English proficiency are more likely than Asian students with lower proficiencies to plan on an academic program and less likely to have "other" or unknown plans. For example, 45 percent of the highly English proficient LM students intend to enroll in an academic program, while 27 percent have unknown or other plans (table 2.13). By contrast, only 24 percent of the LM students with a low English proficiency intend to enroll in an academic program, while 57 percent have unknown or other plans.

LM students' confidence in high school graduation

The most highly English proficient Asian students are also more confident of their graduation from high school, compared with Asian students with moderate proficiency. In fact, 83 percent of the LM students with high proficiency are very sure that they will graduate, and 16 percent are probably sure (table 2.14). By contrast, 69 percent of the moderately proficient LM students are very sure, while 31 percent are probably sure. A similar pattern held for NETIL and non-NETIL Asian students. While 80 percent of the non-NETIL students are very confident of their high school graduation, 60 percent of the NETIL students are as confident.

Future educational plans of LM students

Interestingly, although a similar percentage of recognized and nonrecognized LM Asian students (39 percent and 45 percent, respectively) intend to pursue an advanced degree after graduation from college, a smaller percentage of recognized non-LM Asian students (28 percent) have the same intentions (table 2.15). A greater percentage of those Asian students who are not language minority (that is, monolingual) than both the recognized and nonrecognized LM Asian students have no plans for further education after high school graduation. Specifically, 12 percent of the recognized non-LM students have no post-secondary educational plans, compared with 6 percent of the nonrecognized LM students and 4 percent of the recognized LM students.

Parent's aspirations for their children's education

Parental expectations for their children have been hypothesized to have an effect on the scholastic achievement of the students.[31] In this study, the majority of the Asian parents expect their children to receive a college degree (35 percent) or an advanced degree (42 percent). Only 8 percent of the students have parents who expect less than college attendance (table 2.16). Moreover, some relationship between SES and parental expectations is found among Asian families, with high SES parents more likely than those of low SES to expect their children to receive an advanced degree. For example, 59 percent of the high SES students have parents who expect them to attain an advanced degree, compared with 25 percent of low SES students. Similarly, only 2 percent of high SES students have parents who expect them to receive only a high school diploma, in contrast to 15 percent of low SES students. (Because of the differing parental expectations of students with different SES, the estimates that follow have been adjusted for SES.)

Comparisons between the parents of recognized LM, nonrecognized LM, and recognized non-LM students revealed few significant differences except for their expectations for their children attaining advanced degrees. The parents of almost one-quarter (23 percent) of the monolingual Asian students expect their children to receive advanced degrees. By contrast, 49 percent of both the recognized and nonrecognized LM Asian students have parents who expect them to attain that level of education. This finding parallels the monolingual students' own expectations.

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[31]For a review of some of the research on this subject, see R. Seginer, "Parents' Educational Expectations and Children's Academic Achievements: A Literature Review," *Merrill-Palmer Quarterly*, 29:1–23.

Table 2.16—Unadjusted and adjusted percentage of 1988 Asian eighth graders expected by their parents to attain various levels of education, by SES and LM status*

	Parental expectations:					
	No HS diploma	HS diploma	Vocational school	Some college	College graduation	Advanced degree
Total	0.1	7.4	3.6	12.0	34.9	42.0
Socioeconomic status (unadjusted)						
Low	0.2	15.4	5.3	23.5	30.4	25.1
Medium	0.1	9.0	5.0	13.4	39.0	34.4
High	0.0	1.7	1.2	4.6	33.6	58.9
LM status (adjusted for SES)						
Recognized LM	0.2	4.2	1.8	11.6	33.6	48.7
Nonrecognized LM	0.0	9.0	2.1	7.0	33.2	49.0
Recognized non-LM	0.2	9.2	9.4	18.1	39.7	23.4

* Estimates for the indicated classifications have been adjusted for SES.

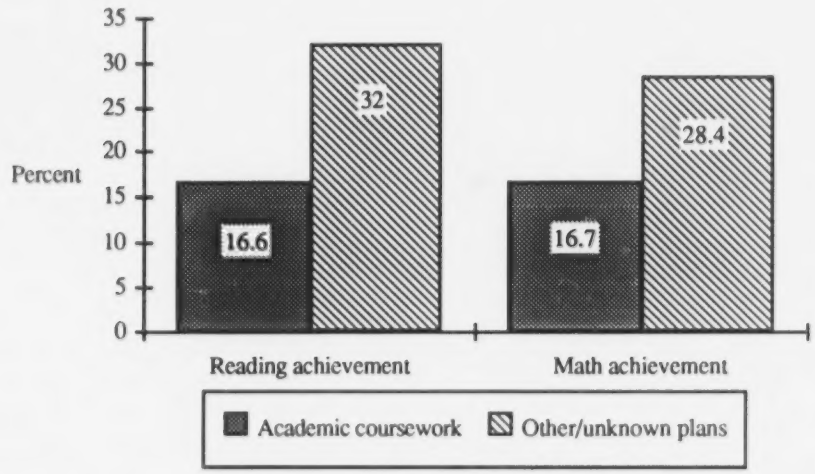
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student, Parent, and Teacher" surveys.

Relationship of Asian Underachievement to Educational Aspirations

In general, Asian students planning to enroll in an academic program fared better on both the reading and math achievement tests than those who had unknown or other plans regarding their high school program. Among students intending to take academic coursework, 17 percent failed to achieve the basic reading level, and 17 percent the basic math level. In contrast, 32 percent of those with other or unknown plans did not achieve the basic reading level, and 28 percent the basic math level (figure 2.18).

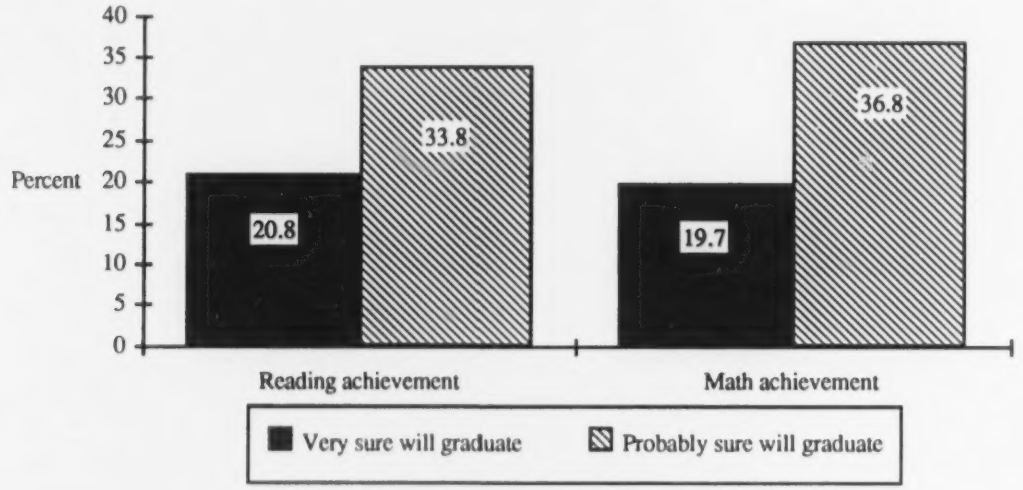
A relationship also existed between confidence in high school graduation and achievement. In both subject areas, the more confident Asian students performed better than the less confident ones. In particular, among the students who are very sure that they would graduate, 21 percent were unable to achieve the basic reading level, and 20 percent the basic math level (figure 2.19). By contrast, 34 percent of those who were probably sure they would graduate failed to achieve the basic reading level, and 37 percent the basic math level.

Figure 2.18—Percentage of 1988 Asian eighth graders unable to achieve the basic reading and math achievement levels, by intended high school program



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Figure 2.19—Percentage of 1988 Asian eighth graders unable to achieve the basic reading and math achievement levels, by confidence in high school graduation

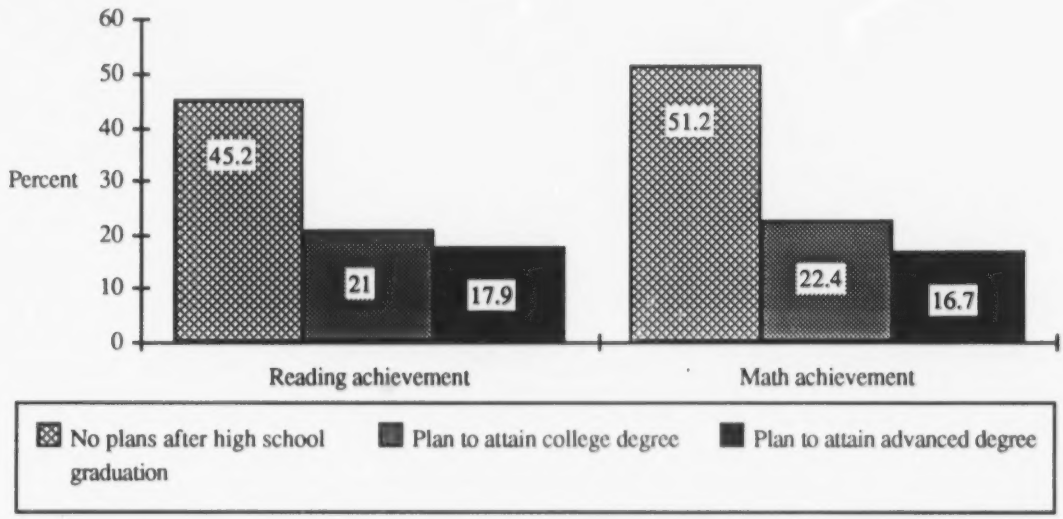


SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Asian students who have no plans for further education after high school were more likely than those who plan to attend college to fail to achieve the basic reading and math levels. On the reading test, 45 percent of those with no future educational plans were unable to achieve the basic level (figure 2.20). By contrast, about 21 percent or less of those envisioning a college education or an advanced degree failed to achieve the basic reading level. On the math test, 51 percent of the students with no plans for education after high school failed to attain the basic level, as opposed to less than 23 percent of those planning to attain a college degree or an advanced degree.

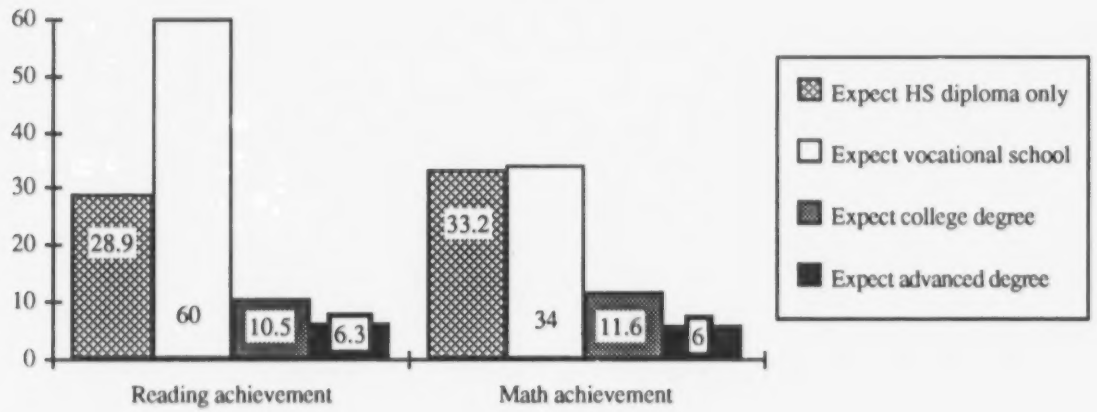
Parental expectations for their children's education are directly related to the students' achievement. Asian students whose parents expect them to graduate college or receive an advanced degree are much more likely to achieve the basic reading level than students whose parents have lower expectations. Specifically, only 10 percent of the students whose parents expect them to attain a college degree and 6 percent of those whose parents expect them to receive a graduate degree failed to achieve the basic reading level (figure 2.21). On the other hand, 29 percent of the students whose parents expected them to only graduate from high school did not attain the basic level of reading performance.

Figure 2.20—Percentage of 1988 Asian eighth graders unable to achieve the basic reading and math achievement levels, by students' plans for further education



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Figure 2.21—Percentage of 1988 Asian eighth graders unable to achieve the basic reading and math achievement levels, by parental expectation of students' future education



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

On the math test the pattern was similar. Thirty-three percent of the Asian students whose parents expect only high school graduation failed to achieve the basic math level, while 6 percent of the Asian students whose parents expect them to attain a graduate degree did not achieve that level.

Review

Almost three-fourths of the Asian eighth graders of 1988 come from a bilingual home. However, only slightly more than one-quarter are identified by at least one of their teachers as being Language Minority. About 6 percent of the non-excluded Asian student body are defined by at least one of their teachers as being Limited English Proficient. Only 6 percent of Asian students had received bilingual education during their first two years of American schooling; about one-quarter of the Asian students had been involved in a language assistance program.

Only a small proportion of the Asian LM students indicate that they have a high proficiency in their ethnic language. On the other hand, the majority of Asian LM students feel that they have a high English proficiency. Even among the Asian NETIL students, about one-third indicate that they have a high English proficiency.

About the same proportion of Asian eighth graders were born in the United States as were born in another country. Not surprisingly, most of the foreign-born Asian students (84 percent) are LM. However, a significant proportion of native-born Asian students (60 percent) are LM as well. Native-born students have the advantage of being more proficient than the foreign-born, but

foreign-born students living in the United States for longer periods of time are more likely to have greater proficiency than those with shorter residencies.

Asian LM students with a low English proficiency are less likely to plan on enrolling in an academic high school program and are more likely to have no or "other" plans than their more proficient counterparts. They are also less likely to be very confident of their graduation from high school. In general, Asian students with intentions for an academic program in high school have a lower failure rate on both the reading and math tests than those with unknown plans. Those with a high confidence in graduation also tend to perform better on the tests.

As a whole, Asian LM students are more likely than Asian non-LM students to have the goal of pursuing an advanced degree after college and are less likely to have no plans for further education after their high school graduation. Overall, Asian students with no aspirations for further education after high school failed to achieve basic achievement levels at higher rates than Asian students with plans for college.

Socioeconomic status played a large role in many of the characteristics examined. For example, among Asian eighth graders, socioeconomic status is positively related to English proficiency, high aspirations for further education, confidence in high school graduation, high parental expectations for the students' further education, and achievement on the standardized tests.

Simply coming from a bilingual home does not affect achievement for Asian students, as non-LM and LM students had basically the same failure rate on both the reading comprehension and math tests. Even after controlling for socioeconomic status and nativity, this similarity remains. English proficiency, however, is positively related to achievement on the reading test, with the more proficient students having a lower failure rate. English proficiency is not related to achievement on the math test.

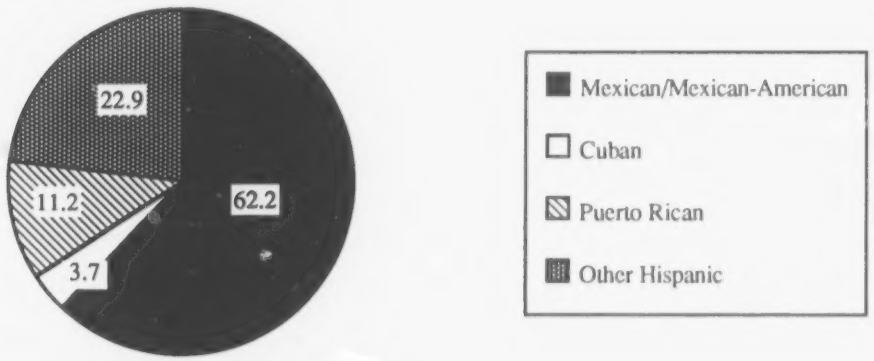
Chapter 3

Profile and Findings
Hispanic Eighth Graders

Hispanic Ethnic Groups

The majority of the Hispanic eighth graders in the United States are of Mexican or Mexican-American descent. Sixty-two percent of the NELS:88 Hispanic students describe themselves as Mexican, Mexican-American, or Chicano, while 11 percent state they are Puerto Rican (figure 3.1). Four percent of the students respond that they are Cuban. Almost 23 percent of the Hispanic students do not describe themselves according to any of these three categories and identify themselves as "other."

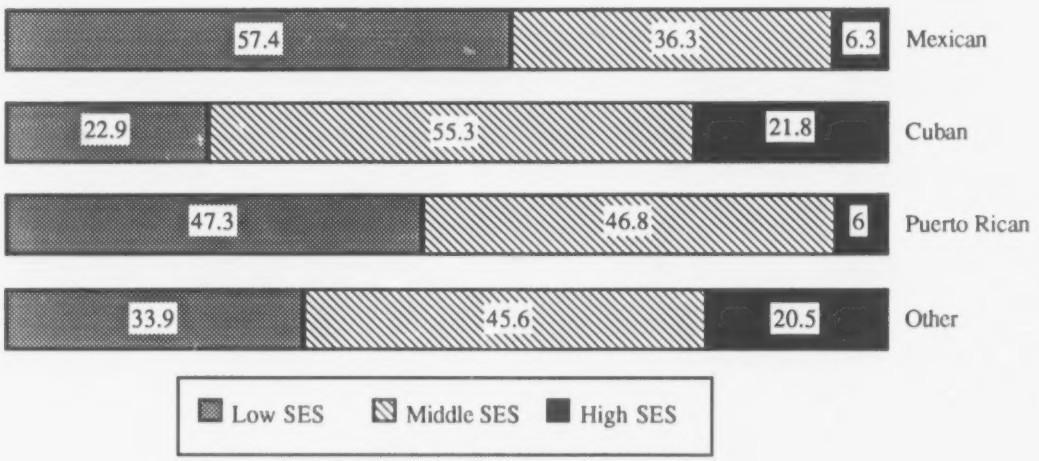
Figure 3.1—Percentage of 1988 Hispanic eighth graders, by ethnicity



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Among the four ethnic groups, Mexican-American and Puerto Rican students have the lowest socioeconomic status. Fifty-seven percent of the Mexican-American students and 47 percent of the Puerto Rican students are in the lowest SES quartile (figure 3.2). Cubans and "other" Hispanics, by contrast, are primarily of middle or high socioeconomic status. Slightly more than 20 percent of both the Cuban and "other" Hispanic students are in the highest SES quartile. Because of the differences in socioeconomic status among the various ethnic groups, the estimates for ethnic groups throughout this report have been adjusted to control for SES. Some variables other than ethnicity have also been adjusted for SES, and when these adjusted estimates are used, the reader will be alerted.[32]

Figure 3.2—Percentage of 1988 Hispanic eighth graders with various SES levels, by ethnicity

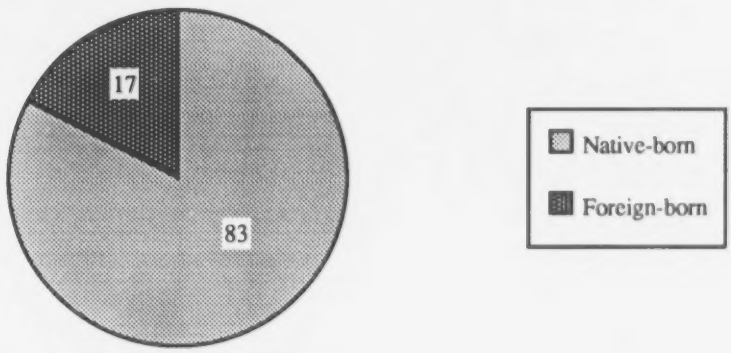


SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

A large majority (83 percent) of the Hispanic students were born in the United States (figure 3.3). Although the eighth-grade students could not be disaggregated into genealogical generations, an attempt was made to divide students into generations using the students' and parents' places of birth. In this scheme, *first generation* refers to a student who was born in another country and who then immigrated to the United States. A *second generation* student is one who was born in the United States, but who has one or both parents who were foreign-born. *Third generation* students will be U.S.-born, and they will have U.S.-born parents. This definition, of course, may include many genealogical generations within the third generation. As displayed in table 3.1, only 17 percent of the Hispanic eighth graders are first generation, while about 41 percent are second generation, and another 42 percent are third generation.

[32]The adjustment removes the differences among students of different ethnic groups (or the appropriate adjusted variable) attributable to differences in SES. See the technical appendix for a description of the adjustment procedure.

Figure 3.3—Percentage of 1988 Hispanic eighth graders, by nativity



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Table 3.1—Percentage of 1988 Hispanic eighth graders, by generation

	Percent
Total	100.0
First generation	17.5
Second generation	40.9
Third generation or higher	41.6

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Parent" survey.

Language Skills of Hispanic Eighth Graders

Home language proficiency

About three-fourths (77 percent) of the Hispanic eighth graders are language minorities (LM), that is, they come from homes in which a non-English language is spoken (table 3.2).[33] Almost all (92 percent) of the foreign-born students are LM, while 74 percent of the native-born students are LM. There are more LM students (92 percent) among the Cuban eighth graders and fewer (67 percent) among those classified as "other" Hispanic.

Table 3.2—Unadjusted and adjusted percentage of 1988 non-LM and LM Hispanic eighth graders, by nativity and ethnicity*

	Non-LM	LM
Total	22.6	77.4
Nativity (unadjusted)		
Native-born	26.3	73.7
Foreign-born	8.3	91.7
Ethnicity (adjusted for SES)		
Mexican	19.6	80.4
Cuban	7.9	92.1
Puerto Rican	17.6	82.4
Other Hispanic	33.0	67.0

* Estimates for the indicated classification have been adjusted for SES.

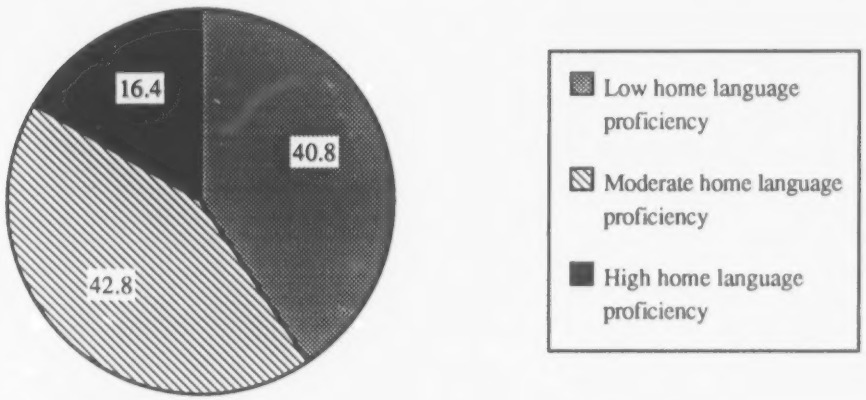
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Even though most Hispanic eighth graders come from homes in which a non-English language is spoken, the majority of these students do not indicate that they are very proficient in their home language. Only 16 percent of LM students indicate that they are highly proficient, while 43 percent and 41 percent indicate moderate and low home language proficiency, respectively (figure 3.4).

[33]Students were asked "Is any language other than English spoken in your home?" Although their ability to speak in a non-English language may be quite limited, exposure to this language has, at the very least, made these students more bilingual than those who come from monolingual households.

Most of the Hispanic LM students use their home language with only moderate frequency; less than 25 percent indicate a high use of their home language (figure 3.5). Even so, the finding that most Hispanic LM eighth graders use their home language a moderate to high proportion of the time and that they do so with a moderate to high proficiency, raises questions about the students' bicultural experiences and their impact on the students' learning. More frequent users indicate a higher home language proficiency; however, even among the most frequent users of a non-English language, about one-half of the students indicate that they have only a moderate proficiency (figure 3.6). This relationship remains even after controlling for SES. Some researchers have found that bilingual children consistently underrate their ability to communicate in their home language, because they are frequently corrected by their parents as to the proper form and style of their home language.[34] Part of the problem arises when students attempt to translate English words that have no equivalent in their home language. Even though students may use this "made up" word in a grammatically correct manner, their elders may interpret this usage as improper.

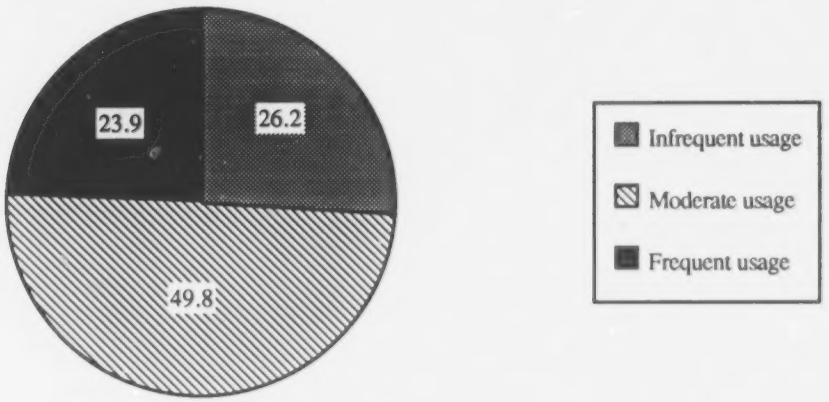
Figure 3.4—Percentage of 1988 Hispanic LM eighth graders, by level of self-reported home language proficiency



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

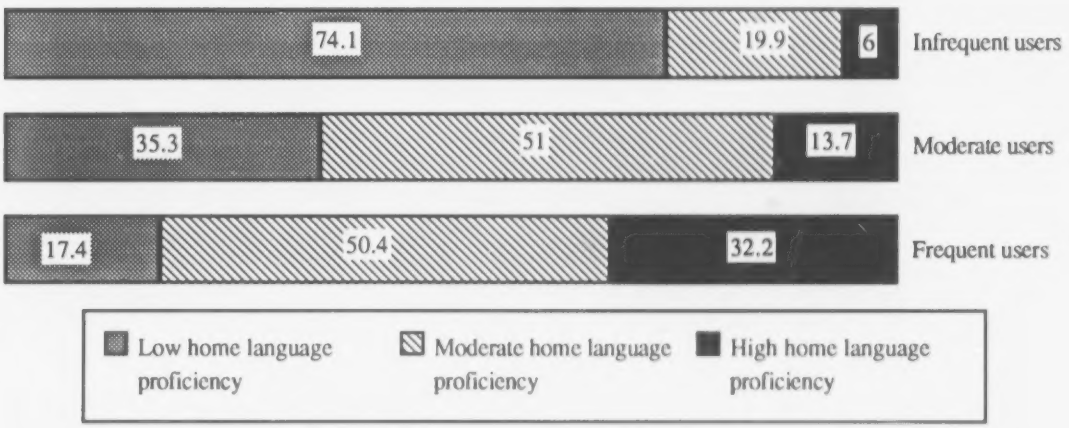
[34]Personal conversation with Dr. Guadelupe Valdes, Professor of Education at the University of California, Berkeley.

Figure 3.5—Percentage of 1988 Hispanic LM eighth graders, by frequency of home language usage



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Figure 3.6—Adjusted percentage of 1988 Hispanic LM eighth graders with various levels of self-reported home language proficiency, by frequency of usage*



* Estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

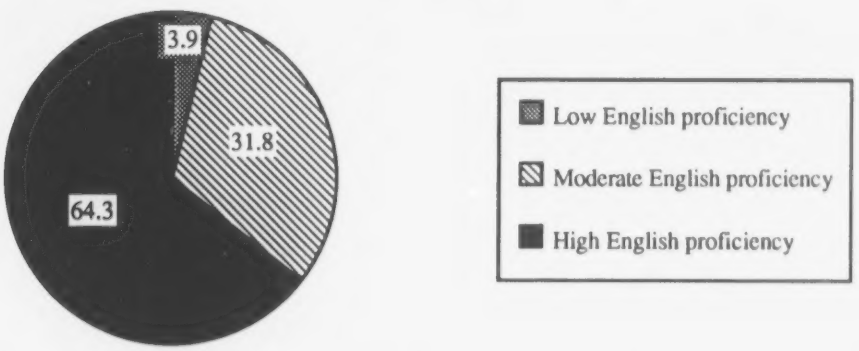
English language proficiency

Regardless of their particular Hispanic ethnic group, most (64 percent) of the LM students report that they are highly proficient in the English language. Thirty-two percent report moderate proficiency, whereas only 4 percent indicate a low English proficiency (figure 3.7).

Relationship between English and home language proficiency

Hispanic LM students with a low home language proficiency assess their English proficiency similarly to those with a high home language proficiency (table 3.3). More than two-thirds of these students indicate a high English proficiency, and one-fourth report a moderate English proficiency. On the other hand, Hispanic LM students who are moderately proficient in their home language are more likely than those with a low or high proficiency to assess their English proficiency at a lower level. For instance, 58 percent of the students with a moderate home language proficiency report a high English proficiency, and 41 percent report a moderate English proficiency. However, 69 percent of those students with either a low or high home language proficiency indicate that they are highly proficient in English.

Figure 3.7—Percentage of 1988 Hispanic LM eighth graders, by level of self-reported English language proficiency



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Table 3.3—Percentage of 1988 Hispanic LM eighth graders with various levels of self-reported English language proficiency, by self-reported home language proficiency

	English language proficiency		
	Low	Moderate	High
Total	3.9	31.8	64.3
Home language proficiency			
Low	6.0	25.3	68.7
Moderate	1.4	40.6	58.0
High	4.9	26.0	69.2

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Although this relationship between English and home language proficiency at first glance seems a bit unusual, it has been noticed elsewhere. As debate on the subject continues, many experts of linguistics ascribe to theories of *additive* and *subtractive* bilingualism.[35] An example of additive bilingualism would be the learning of a second language by a person already proficient in the culturally dominant language. However, subtractive bilingualism is more often experienced by ethnic minorities when their home language is replaced by the more "prestigious" national language of their host country. Cummins has also suggested a threshold hypothesis for language learning that distinguishes between *proficient*, *partial*, and *limited* bilinguals. He reports that proficient bilinguals have reached proficiency in both languages; partial bilinguals are in the process of adding, replacing, or subtracting a language and are proficient in one language while limited in another; and limited bilinguals lose proficiency in one language before gaining proficiency in another. Furthermore, Cummins theorizes that limited bilinguals, like Lambert's subtractive bilinguals, may never become proficient in either language.

Although there are no differences noted among ethnic groups in how students assess their English language proficiency, when comparing Mexican and Cuban students some slight differences in home language proficiency are apparent. For example, about 14 percent of both ethnic groups indicate a high home language proficiency (table 3.4). However, Cubans are more likely than Mexicans to indicate that they are moderately proficient in their home language (57 percent versus 41 percent).[36]

[35]The theories of Lambert and Tucker (1972), Skutnabb-Kangas and Toukomaa (1979), and Cummins (1976, 1978) are reviewed by D.P. Dolson in "Bilingualism and Scholastic Performance: The Literature Revisited," *NABE Journal*, X (1985):1–35.

[36]The difference in the percentages of Cuban and Other Hispanic students indicating a moderate home language proficiency is also statistically significant.

Relationship between language proficiency and socioeconomic status

Socioeconomic status is found to be strongly related to English proficiency among Hispanic LM students. That is, as SES increases, the percentage of LM students having a higher English proficiency increases as well. For instance, 83 percent of high SES Hispanic LM students have a high English proficiency, while only 56 percent of the low SES Hispanic LM students indicate being highly proficient in English (table 3.5). Likewise, less than 1 percent of high SES students indicate a low English proficiency, while 5 percent of the low SES students report this same English proficiency.

Home language proficiency, on the other hand, decreases with increasing socioeconomic status among Hispanic LM students. However, the differences are not as great as they are for English proficiency. For example, 19 percent of low SES students indicate they are highly proficient in their home language, compared with 11 percent of high SES students. Thirty-six percent of low SES students have low proficiency in their home language, while 48 percent of high SES students indicate this same level of proficiency.

Table 3.4—Adjusted percentage of 1988 Hispanic LM eighth graders with various levels of self-reported home language proficiency, by ethnicity and U.S. residence*

	Home language proficiency		
	Low	Moderate	High
Total	40.8	42.8	16.4
Ethnic groups (adjusted for SES)			
Mexican	43.7	41.4	15.0
Cuban	29.0	56.9	14.1
Puerto Rican	35.2	45.2	19.7
Other Hispanic	37.1	43.7	19.2
Student's U.S. residence (adjusted for SES)			
Native-born	44.8	40.6	14.5
<6 years	20.9	37.9	41.2
6-8 years	18.8	52.2	29.0
9-11 years	26.7	56.5	16.8
>11 years	36.2	47.0	16.7

* Classification estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Table 3.5—Percentage of 1988 Hispanic LM eighth graders with various levels of self-reported English and home language proficiency, by SES

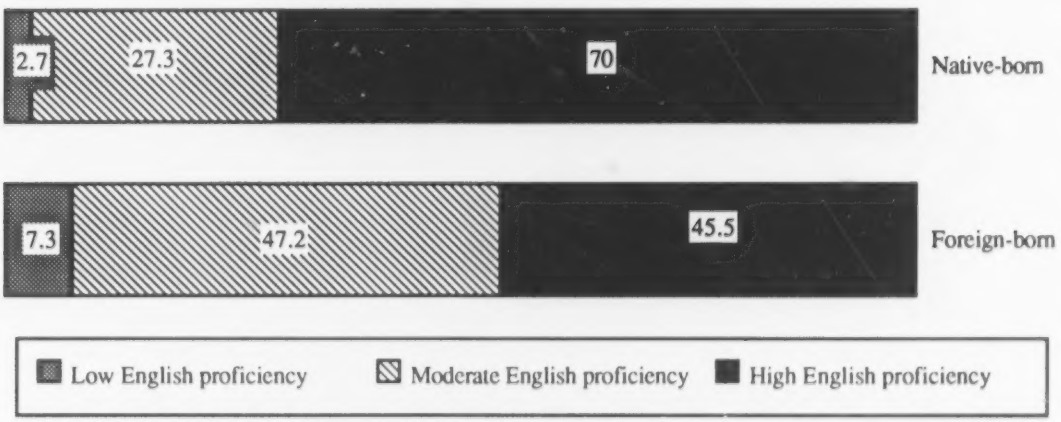
	English language proficiency			Home language proficiency		
	Low	Moderate	High	Low	Moderate	High
Total	3.9	31.8	64.3	40.8	42.8	16.4
Socioeconomic status						
Low	5.4	39.1	55.6	35.5	45.1	19.4
Middle	2.7	24.7	72.6	46.8	40.0	13.2
High	0.1	16.6	83.3	48.2	40.3	11.5

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Relationship between language proficiency, birthplace, and residence in the United States

Hispanic LM students who are natives of the United States, not surprisingly, are more proficient in English than their foreign-born peers. Specifically, 70 percent of the native-born Hispanic LM students have a high English proficiency, as opposed to 46 percent of the foreign-born Hispanic LM students (figure 3.8). However, as the length of students' residency increases, the percentage indicating a high English proficiency rises as well. In fact, the percentage of foreign-born students who have resided in the United States for more than 11 years and who are highly English proficient is not significantly different from that of native-born students with a high English proficiency (figure 3.9). (Because of the relationship between SES and English language proficiency, the estimates in the preceding and following paragraphs have been adjusted to control for SES.)

Figure 3.8—Adjusted percentage of 1988 Hispanic LM eighth graders with various levels of self-reported English language proficiency, by nativity*

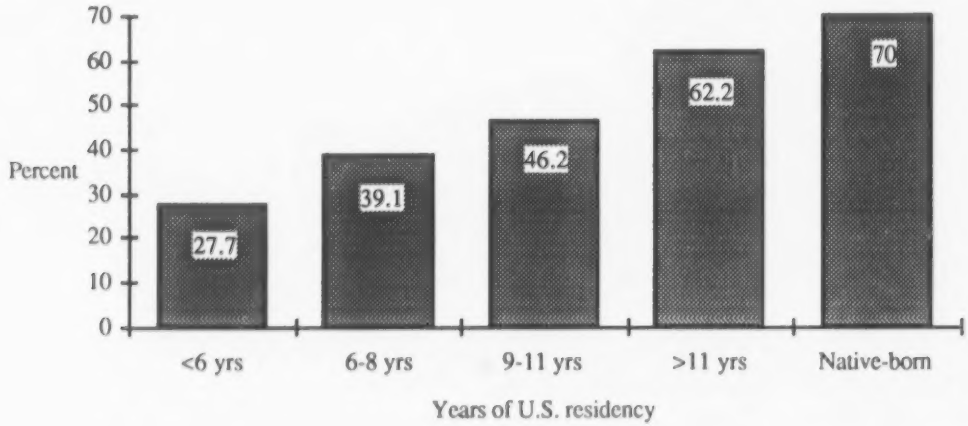


* Estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

The student's place of birth is also related to home language proficiency. The majority of U.S. native-born Hispanic LM students have a low (45 percent) or moderate (41 percent) home language proficiency (figure 3.10). By contrast, almost one-half (49 percent) of the foreign-born Hispanic LM students have a moderate home language proficiency, while 25 percent indicate being highly proficient.

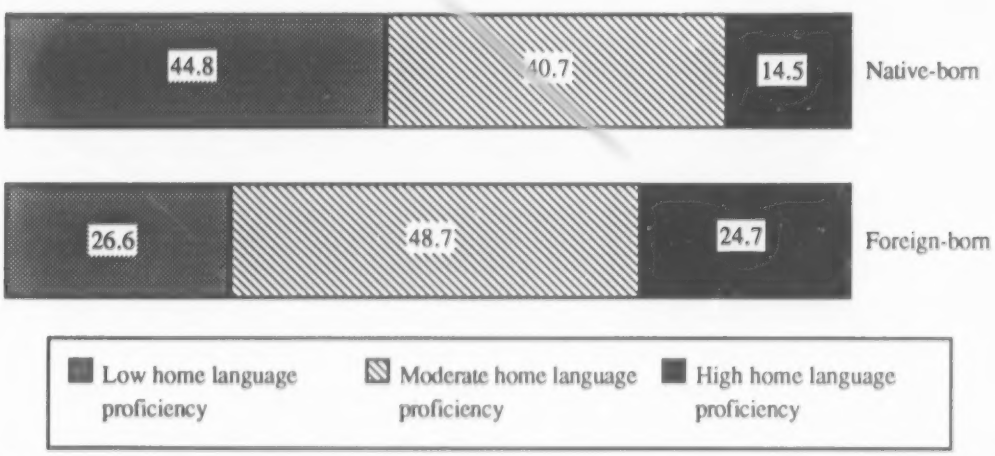
Figure 3.9—Adjusted percentage of 1988 Hispanic LM eighth graders indicating a high English language proficiency, by length of U.S. residence*



* Estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Figure 3.10—Adjusted percentage of 1988 Hispanic LM eighth graders with various levels of self-reported home language proficiency, by nativity*



* Estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

As length of residency increases, home language proficiency appears to decrease. In particular, 41 percent of the Hispanic LM students who have resided in the United States for less than 6 years indicate a high home language proficiency, whereas only 17 percent of the Hispanic LM students who have been living here for more than 9 years indicate this same proficiency (table 3.4). The percentage of foreign-born LM students who have resided in the United States for more than 6 years and who are highly proficient in their home language is not significantly different from the percentage of highly proficient native-born LM students.

Relationship between parent's and student's language proficiency

Student's and parent's English proficiency levels are directly related, with parents who are more proficient in English being more likely to have children who are also highly English proficient. In fact, 73 percent of the Hispanic LM students with highly English proficient parents are also highly proficient in English, whereas 54 percent of the Hispanic LM children of parents with a low English proficiency are highly proficient (table 3.6). Similarly, 24 percent of the students with highly proficient parents have a moderate English proficiency, compared with 39 percent of the students whose parents have low proficiency. (These estimates have been adjusted to control for SES.)

Table 3.6—Adjusted percentage of 1988 Hispanic LM eighth graders with various levels of self-reported English language proficiency, by responding parent's self-reported English language proficiency*

	English language proficiency		
	Low	Moderate	High
Total	3.9	31.8	64.3
Parent's English language proficiency (adjusted for SES)			
Low	7.4	38.5	54.1
Moderate	0.9	36.0	63.1
High	2.0	24.3	73.7

* Classification estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Relationship of Hispanic Underachievement to Ethnicity and Language Proficiency

Ethnicity

Similar percentages of Mexican and Cuban LM students were unable to attain the basic reading level (28 percent and 31 percent, respectively). The percentage of Puerto Rican LM students who were also unable to reach this reading level was higher (41 percent); however, the only difference that is statistically significant exists between the Mexican and Puerto Rican students (table 3.7). The relationship between the ethnicity of the LM students and their achievement on the math test is not significant.

Table 3.7—Adjusted percentage of 1988 Hispanic non-LM and LM eighth graders unable to achieve the basic reading and math achievement levels, by ethnicity*

	Reading achievement		Math achievement	
	Non-LM	LM	Non-LM	LM
Total	30.2	31.0	36.1	36.6
Ethnic groups (adjusted for SES)				
Mexican	29.4	28.1	39.7	35.4
Cuban	Low-N	30.6	Low-N	33.8
Puerto Rican	37.5	41.1	48.0	42.4
Other Hispanic	26.2	35.3	25.3	37.4

* Classification estimates have been adjusted for SES.

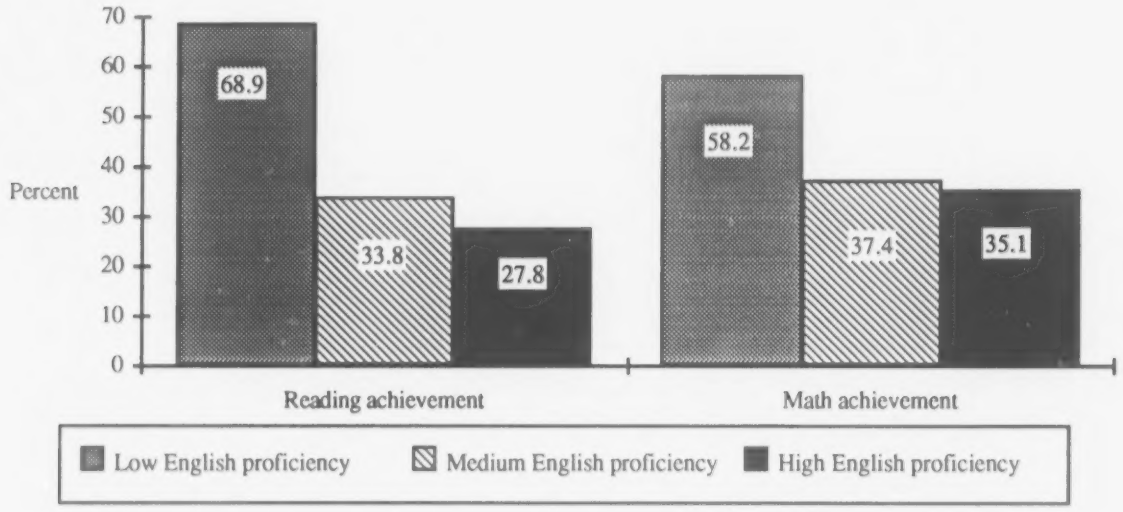
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Language use and proficiency

Overall, the same percentage of Hispanic LM and non-LM students were unable to achieve the basic level in reading (about 30 percent) and in math (about 36 percent). Even when controlling for socioeconomic status and nativity, this similarity remains.

However, proficiency in the English language among Hispanic LM students was strongly related to reading and math achievement. As English proficiency increased, the percentage of those who failed to achieve the basic levels decreased. Sixty-nine percent of the low English proficient Hispanic students failed to reach the basic level on the reading test, compared with 34 percent of the moderately proficient and 28 percent of the highly proficient. On the math test, 58 percent of the low English proficient Hispanic students failed to achieve the basic level, compared with 37 percent of the moderately proficient and 35 percent of the highly proficient (figure 3.11). (Estimates of the relationships between English proficiency and underachievement have been adjusted to control for SES).

Figure 3.11—Adjusted percentage of 1988 Hispanic LM eighth graders unable to achieve the basic reading and math achievement levels, by self-reported English language proficiency*



* Estimates have been adjusted for SES.

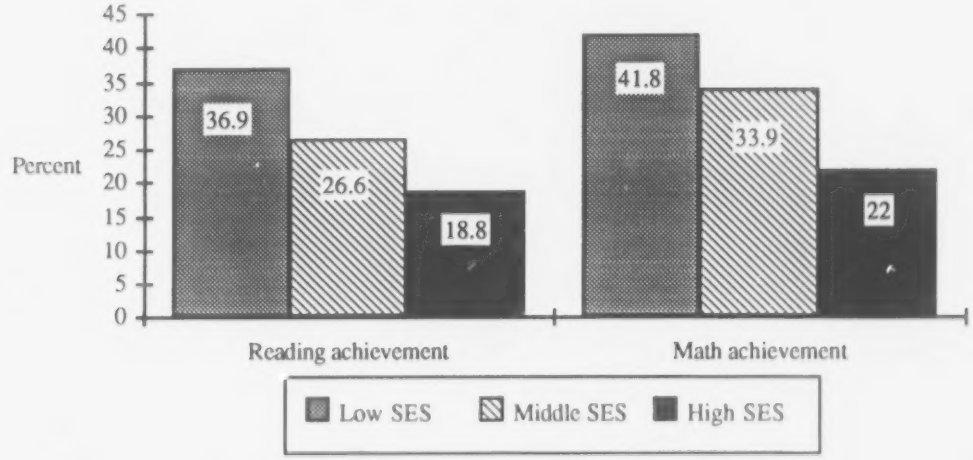
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Socioeconomic status

Greater proportions of Hispanic students with higher SES achieved above the basic levels on both tests than those with lower SES. Although 19 percent of high SES students could not achieve the basic reading level, almost twice that percentage of low SES students (37 percent) could not reach this level (figure 3.12). A similar pattern emerged on the math test: 22 percent of the high SES students did not achieve the basic level, compared with 42 percent of those with low SES.

The relationship between SES and achievement persisted among Hispanic students even when English proficiency was held constant. For example, among the LM eighth graders with high English proficiency, 32 percent of the low SES students failed to achieve the basic reading level, compared with only 16 percent of the high SES students (table 3.8). The same was true for math achievement. Low SES LM students with high English proficiency failed to achieve at the basic math level at a higher rate (40 percent) than those LM students with high SES (24 percent).

Figure 3.12—Percentage of 1988 Hispanic eighth graders unable to achieve the basic reading and math achievement levels, by SES



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Table 3.8—Percentage of 1988 Hispanic LM eighth graders with various SES levels unable to achieve the basic reading and math achievement levels, by self-reported English language proficiency

	Reading achievement			*Math achievement*		
	Socioeconomic status			Socioeconomic status		
	Low	Middle	High	Low*	Middle	High
Total	36.8	26.6	18.8	41.8	33.9	22.0
English proficiency						
Low	70.4	Low-N	Low-N	56.6	Low-N	Low-N
Moderate	39.2	25.9	35.6	39.6	37.0	30.8
High	32.0	24.0	15.8	40.4	30.6	23.6

* Although the differences seem large, the estimates in this column are not statistically different from each other.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Teacher Identification of Hispanic Eighth Graders

Two teachers for each eighth grader included in the NELS:88 study were also surveyed. Each teacher was asked to indicate whether the student was language minority (LM) and also whether the student had limited English proficiency (LEP). This study combined the two teachers' responses into one "teacher identification"; students were teacher-identified as LM if one of the following occurred: (a) both teachers indicated that the student was LM; (b) only one teacher responded to the question and indicated that the student was LM; or (c) one teacher indicated that the student was LM and the other teacher did not. Thus, if at least one teacher identified the student as LM, the student was teacher-identified as LM. The same process determined the teacher identification of LEP: if at least one teacher indicated that the student was LEP, the student was teacher-identified as LEP. The description used in this report is non-excluded teacher-identified LEP (NETIL).[37]

In this section, the teachers' evaluations of the eighth grader's LM and LEP status are compared with the students' reports of whether or not a second language is spoken in the home and the students' self-reported English language proficiency. The results indicate that teachers and students often have different views of the LM and LEP status of the students.

Recognized and nonrecognized language minority students

Among Hispanic eighth graders, 76 percent indicate that a second language is spoken in the home. However, only 39 percent of Hispanic students are teacher-identified as being language minority (figure 3.13). The majority of Hispanic students who are from monolingual homes are identified by their teachers as not being LM: 24 percent of Hispanic students indicate that only English is spoken in the home, and all but 4 percent of these students are identified by teachers as *not* being language minority. For this analysis, when students and teachers have a different assessment of whether or not the student is LM, regardless of the nature of the disparity, those students are called *nonrecognized language minority* in order to relate the disparity between the student and teacher responses.

Overall, 55 percent of the Hispanic students agree with their teachers about the students' language minority status (35 percent LM and 20 percent non-LM), while 45 percent disagree (41 percent are from bilingual homes and teacher-identified as non-LM, and 4 percent from English-only homes and teacher-identified as LM). In order to distinguish between the 76 percent of Hispanic students who are LM and the 35 percent of Hispanic students who are not only LM but also teacher-identified as such, the term *recognized LM* is used for the latter group. Similarly, *recognized non-LM* denotes those non-LM students who are teacher-identified as non-language minority. The third category, mentioned above and called *nonrecognized LM*, denotes students whose answers regarding their LM status do not match their teacher's identification. Most of the students within this category are LM and identified as non-LM, but a small minority are non-LM and identified as LM.

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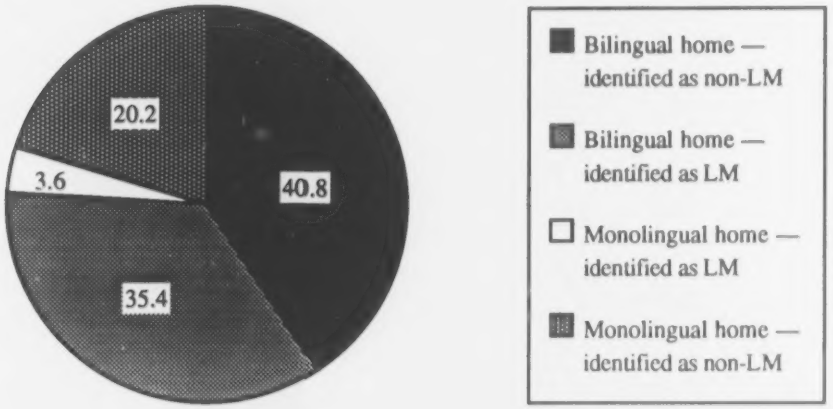
[37] As explained in the first chapter, students were excluded from the base-year survey if they were thought to have insufficient English skills to fill out the survey forms and tests. Therefore, the most limited English proficient students were not included. See appendix B for further information about the LM and NETIL variables.

Figure 3.13—Percentage of 1988 Hispanic eighth graders, by teacher- and student-reported LM status



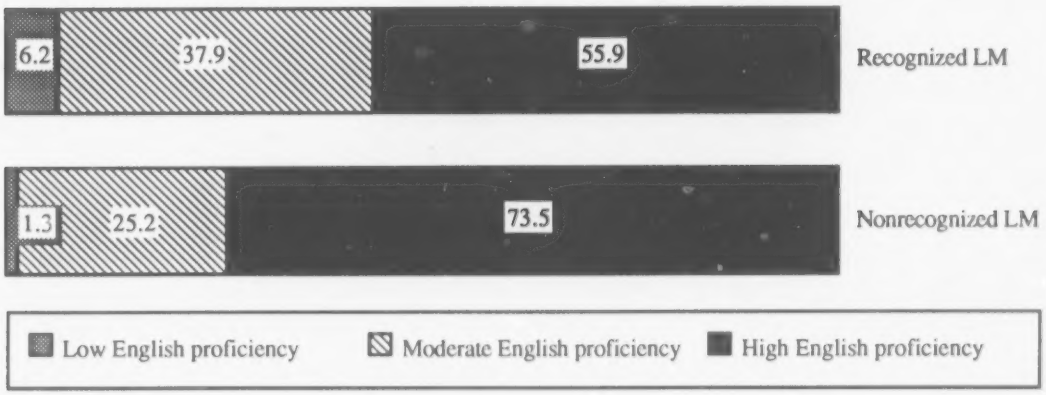
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

The English language proficiency of the recognized LM Hispanic eighth graders was compared with the proficiency of the nonrecognized LM students. In general, the nonrecognized LM students are more proficient in English than the recognized LM students. For example, 74 percent of the Hispanic nonrecognized LM students are highly proficient in English, as opposed to only 56 percent of the Hispanic recognized LM students (figure 3.14). Similarly, only 1 percent of the nonrecognized LM eighth graders have a low English proficiency, compared with 6 percent of the recognized LM students.[38]

These results indicate that if the language minority status of students is determined solely by their teachers, a significant proportion of students who are from bilingual homes are not being evaluated as language minority. Furthermore, including these nonrecognized LM students with teacher-identified language minority students would significantly change an evaluation of the English proficiency level of language minority students.

[38]Students who responded that only English was spoken in the home were not asked to assess their language skills. In this instance, therefore, the nonrecognized LM category does not include the 4 percent of students who stated that they came from a monolingual home and whose teachers defined them as language minority.

Figure 3.14—Percentage of 1988 Hispanic LM eighth graders with various levels of self-reported English language proficiency, by LM recognition



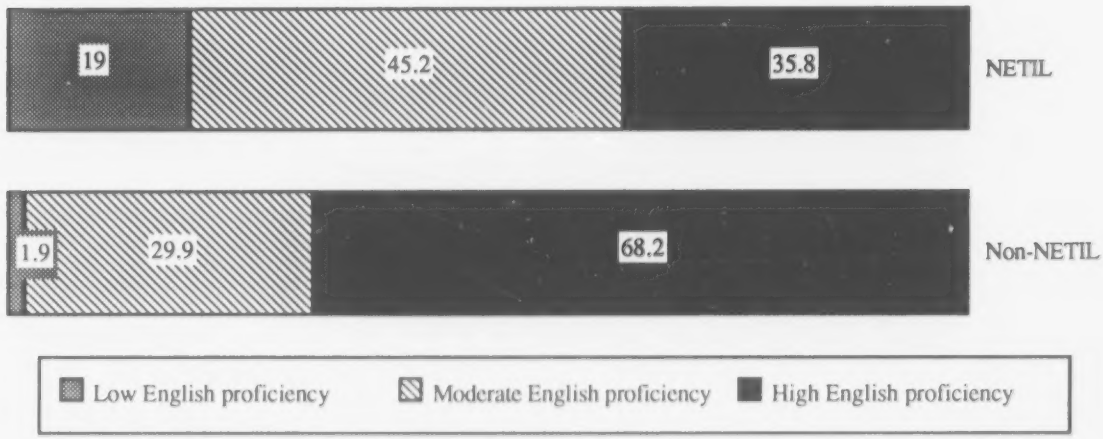
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

Non-excluded teacher-identified limited English proficient students

About 8 percent of the Hispanic eighth graders included in the sample are identified by at least one of their teachers as having limited English proficiency. However, among these students, more than one-third (36 percent) report that they have relatively high English proficiency, while 45 percent indicate moderate proficiency. By comparison, among Hispanic language minority non-NETIL students, 68 percent indicate they are highly proficient, and 30 percent report moderate proficiency (figure 3.15).

Because the more severely limited English proficient students were excluded from the NELS:88 Base-Year survey, the degree to which students and teachers disagree about the student's LEP status is probably overestimated in this study. However, a more detailed examination of the differences between student and teacher evaluation of language skills would be of interest, particularly in light of the ongoing debate about the effectiveness of bilingual education programs.

Figure 3.15—Percentage of 1988 Hispanic LM eighth graders with various levels of self-reported English language proficiency, by NETIL status



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

Bilingual instruction

During their first 2 years in school in the United States, less than 10 percent of the Hispanic LM students received instruction in a language other than English (table 3.9).[39] Although these estimates apply only to students who come from bilingual homes, both students who were born in the United States and those who were foreign-born are included. Therefore, "first 2 years of school in the United States" might as easily apply to first and second grade as to fifth and sixth grade.

A small proportion of Hispanic LM eighth graders received bilingual instruction in their first 2 years of American schooling. About 8 percent of the Hispanic students were taught language arts (United States literature, reading, or writing) in a non-English language, and 8 percent received instruction in mathematics in another language. Six percent received bilingual instruction in other subjects (science, United States history, government, or social studies). A clear relationship exists between socioeconomic status and whether or not students received bilingual instruction. About 10 percent of the low SES Hispanic LM students received bilingual instruction, in comparison with less than 3 percent of the high SES Hispanic LM students. Because of the relationship between SES and bilingual instruction, estimates in the rest of this section have been adjusted to control for SES.

[39]Students were not specifically asked whether these subjects were taught in their native languages, but rather if they were taught in English or in a language other than English. A third possible response was "subject not taught." See appendix A for more detail on the wording of the question.

Table 3.9—Unadjusted and adjusted percentage of 1988 Hispanic LM eighth graders receiving instruction in a non-English language during first 2 years of American schooling, by SES, nativity, LM status, and self-reported English proficiency*

	Subjects taught in a non-English language		
	Language Arts	Mathematics	Other subjects
Total	8.5	8.0	6.5
Socioeconomic status (unadjusted)			
Low	11.8	10.5	9.2
Middle	5.1	5.7	3.8
High	2.2	2.0	1.6
Student's nativity (adjusted for SES)			
Native-born	6.7	5.4	4.6
Foreign-born	12.2	16.4	11.3
LM status (adjusted for SES)			
Recognized LM	7.5	9.0	6.4
Nonrecognized LM	7.8	5.5	5.5
English proficiency (adjusted for SES)			
Low	16.8	37.6	31.4
Moderate	13.0	11.4	8.9
High	5.7	4.4	3.8

* Estimates for the indicated classifications have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student, Parent, and Teacher" surveys.

Native-born students were less likely to have been instructed in a non-English language than foreign-born students. Specifically, 7 percent of native-born Hispanic LM students were taught language arts in a non-English language, and 5 percent were taught math in a non-English language (table 3.9). By contrast, 12 percent of the foreign-born Hispanic LM students were instructed in language arts, and 16 percent were taught math in a non-English language.

Among Hispanic eighth graders, recognized LM students were more likely than nonrecognized students to have received math instruction in a non-English language (9 percent versus 6 percent). However, similar differences for language arts instruction and other subjects could not be discerned. After adjusting for SES, no differences could be observed between Hispanic NETIL and non-NETIL students in bilingual instruction.

Hispanic LM students with a higher self-reported English proficiency were less likely than those with a moderate or low proficiency to have received English or math instruction in a non-English language. For instance, 6 percent of the highly English proficient students received bilingual language arts instruction, compared with 13 percent of the students with a moderate English proficiency. Likewise, 4 percent of the highly English proficient students received bilingual math instruction, as opposed to 12 percent of the students with moderate proficiency and 38 percent of the students with low proficiency.

Language minority students' involvement in language assistance programs

LM students were also asked if they had ever been enrolled in an English language assistance program.[40] Twenty percent of the Hispanic LM students responded that they had been enrolled in such a program (table 3.10). Again, LM students with low SES were more likely to have been enrolled in an assistance program than LM students with moderate or high SES. Specifically, 25 percent of low SES Hispanic students had taken advantage of such a program, in comparison with 12 percent of high SES Hispanic students. In general, a large proportion (66 percent) were enrolled in the first, second or third grades. Almost one-half (45 percent) were enrolled in the fourth, fifth or sixth grades, and 19 percent were enrolled in the seventh or eighth grades. (Because of the relationship between SES and enrollment in language assistance programs, the following estimates have been adjusted to control for SES.)

Hispanic recognized LM students were more likely to have been enrolled in a language assistance program than Hispanic nonrecognized LM students (26 percent versus 14 percent). Similarly, NETIL students were more likely than non-NETIL students to have been enrolled in an assistance program (43 percent versus 17 percent). In addition, NETIL students' involvement in such programs tended to be more recent than non-NETIL students. Among the Hispanic NETIL students who had participated in an assistance program, 46 percent were enrolled in the first through third grade and 58 percent in the fourth through sixth grade. By contrast, 74 percent of the Hispanic non-NETIL students who participated in a language program had been involved during the first through third grade and 39 percent during the fourth through sixth grade.

Again, as students' English proficiency increases, the likelihood of their having attended a language assistance program decreases. For example, one-half of those Hispanic eighth graders with low English proficiency had been enrolled in a language assistance program, in comparison with 14 percent of those who are highly proficient.

[40]To examine the exact wording of the question, see appendix A.

Table 3.10—Unadjusted and adjusted percentage of 1988 Hispanic LM eighth graders enrolled in a language assistance program, by SES, LM and NETIL status, and self-reported English language proficiency*

	Ever enrolled in language program	Enrolled in 1st, 2nd, 3rd grd	Enrolled in 4th, 5th, 6th grd	Enrolled in 7th, 8th grd
Total	20.1	66.4	45.1	18.9
Socioeconomic status (unadjusted)				
Low	24.7	69.5	45.1	14.3
Medium	15.4	59.4	46.6	27.8
High	11.9	Low-N	Low-N	Low-N
LM status (adjusted for SES)				
Recognized LM	25.6	65.8	45.0	16.0
Nonrecognized LM	13.8	70.3	40.3	20.2
NETIL status (adjusted for SES)				
NETIL	42.8	45.9	57.6	29.3
Non-NETIL	17.2	74.1	38.9	14.1
English proficiency (adjusted for SES)				
Low	50.1	33.9	52.7	33.6
Moderate	29.1	65.2	49.5	21.0
High	13.7	76.3	38.3	12.0

* Estimates for the indicated classifications have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

Relationship of Hispanic Underachievement to Language Status and Bilingual Education

Language minority status

After adjusting for SES, LM students who were not recognized as language minority failed the reading and math tests in similar proportions as those LM students who *were* recognized as language minority (table 3.11). On the reading test, 27 percent of the nonrecognized LM students failed to achieve the basic level, compared with 33 percent of the recognized LM students. On the math test, 33 percent of the nonrecognized LM students failed to reach the basic level, while 37 percent of the recognized LM students did the same. It is interesting to note that the reading failure rates between nonrecognized LM students and non-LM students did not differ significantly.

Hispanic eighth graders who came from homes where only English was spoken (non-LM) but who were identified as language minority (nonrecognized LM) were more apt to fail to achieve the basic math level (45 percent) than those students who were LM but who were not recognized as such (33 percent). The same pattern was not observed, however, for reading achievement.[41]

Table 3.11—Adjusted percentage of 1988 Hispanic eighth graders unable to achieve the basic reading and math achievement levels, by LM status*

	Reading achievement		Math achievement	
	Non-LM	LM	Non-LM	LM
Total	30.2	31.0	36.1	36.6
LM status (adjusted for SES)				
Recognized LM	—	33.0	—	36.8
Nonrecognized LM	27.3	26.9	44.9	32.7
Recognized non-LM	28.2	—	34.0	—

— These cells are empty. Non-LM students are either recognized non-LM or nonrecognized LM; LM students are either recognized LM or nonrecognized LM. Placement depends upon teacher descriptions. See page 69.

* Classification estimates have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

[41] Return to page 69 for the definition of nonrecognized LM students.

Bilingual education

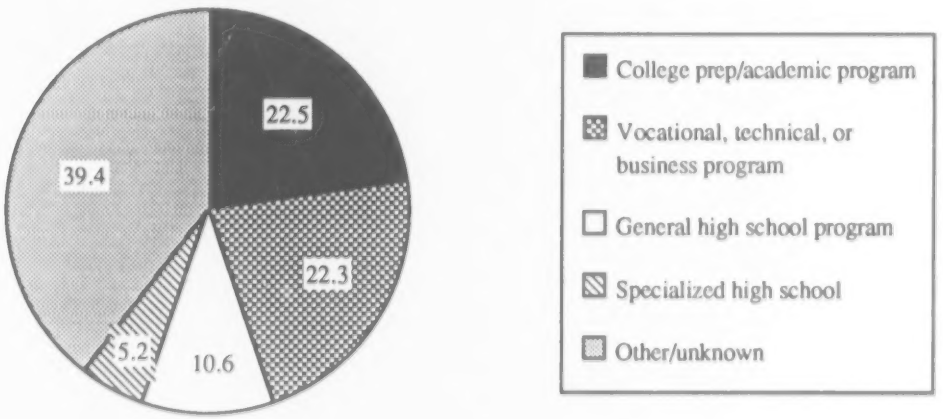
After adjusting for SES and holding English proficiency constant, the differences observed in reading and math failure rates between Hispanic LM students who received bilingual instruction in their first 2 years of American schooling and those who did not were not significant.

Educational Aspirations of Hispanic Eighth Graders

High school plans

Twenty-three percent of the Hispanic eighth graders plan to enroll in an academic program during their high school years, and a similar proportion of students (22 percent) plan to enroll in a vocational program. Eleven percent of the Hispanic students indicate they will participate in a general program, while 5 percent look forward to attending a specialized high school (such as a fine arts school). The remaining proportion of students do not know which high school program they will enter (figure 3.16).[42]

Figure 3.16—Percentage of 1988 Hispanic eighth graders, by intended high school program



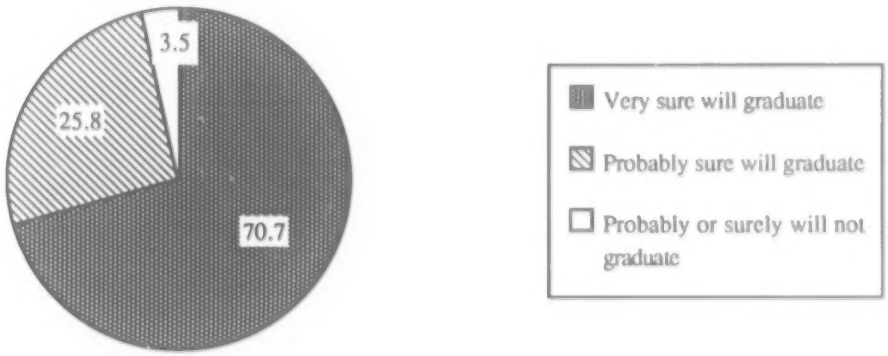
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

[42]This percentage also includes students who reported having "other" plans. To examine the exact wording of all questions used in the following sections, see appendix A.

Most Hispanic students (71 percent) are very sure that they will graduate from high school. Twenty-six percent report that they will probably graduate, while 3 percent reply that they probably or surely will not graduate from high school (figure 3.17).

Among Hispanic eighth graders, these aspiration patterns remain similar regardless of ethnicity. However, socioeconomic status is related to both the students' choices of high school program and their confidence in their eventual high school graduation. For example, far more high SES Hispanic students intend to enroll in an academic program (39 percent) than middle SES students (25 percent) or low SES students (17 percent) (table 3.12). In addition, low SES students are more likely than high SES students to be planning a vocational program (24 percent versus 15 percent). Finally, a larger percentage of low SES Hispanic students (44 percent) are unsure of their intended program in high school (or have made other plans) than either middle or high SES students (36 percent and 30 percent, respectively).

Figure 3.17—Percentage of 1988 Hispanic eighth graders, by confidence in high school graduation



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Table 3.12—Unadjusted and adjusted percentage of 1988 Hispanic eighth graders planning to enroll in various HS programs, by SES and self-reported English proficiency*

	Plan to enroll in				Unknown or other plans
	Academic program	Vocational program	General program	Specialized program	
Total	22.5	22.3	10.6	5.2	39.4
Socioeconomic status (unadjusted)					
Low	17.2	24.0	9.9	4.8	44.1
Medium	24.7	22.1	11.4	5.8	36.0
High	38.9	15.5	11.3	4.4	30.0
English proficiency (adjusted for SES)					
Low	11.5	30.4	7.1	2.5	48.5
Moderate	20.3	23.4	10.0	3.3	42.5
High	24.6	22.3	10.6	6.2	36.4

* Estimates for the indicated classification have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Although the majority of Hispanic eighth graders from all socioeconomic levels are very sure they will graduate, the size of that majority grows as SES increases. For example, 62 percent of low SES students are very sure that they will graduate, and 77 percent of middle SES students and 88 percent of high SES students believe similarly (table 3.13). On the other hand, 5 percent of low SES students believe they probably or surely will not graduate. In contrast, only 2 percent of the middle SES students think they might not graduate, and not graduating is an idea that occurs to less than 1 percent of the high SES students.

Table 3.13—Unadjusted and adjusted percentage of 1988 Hispanic eighth graders with various levels of confidence in their HS graduation, by SES, NETIL status, and self-reported English language proficiency*

	Very sure will graduate	Probably sure will graduate	Probably/surely will not graduate
Total	70.7	25.8	3.5
Socioeconomic status (unadjusted)			
Low	61.7	33.0	5.3
Medium	77.3	20.7	2.0
High	87.7	11.6	0.7
NETIL status (adjusted for SES)			
NETIL	56.1	36.4	7.5
Non-NETIL	72.7	24.4	2.9
English language proficiency (adjusted for SES)			
Low	55.1	35.4	9.5
Moderate	62.6	34.0	3.3
High	75.1	22.4	2.5

* Estimates for the indicated classifications have been adjusted for SES.

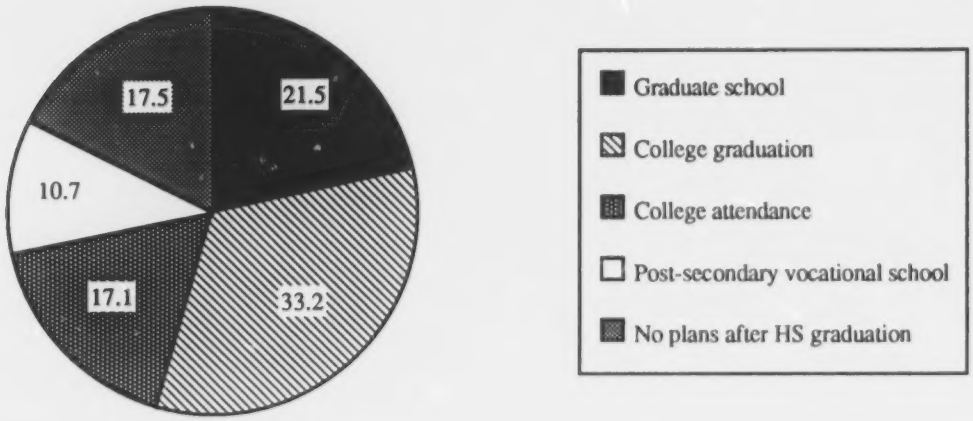
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

Future educational plans

With regard to educational plans after high school, 21 percent of the Hispanic eighth graders plan to continue their education after college; 33 percent plan to graduate from college; 17 percent plan to at least attend college; and 11 percent plan to attend a vocational or business school after high school graduation (figure 3.18). About 18 percent of the Hispanic students intend to graduate from high school and have no intentions to pursue any further education.[43]

[43]Students were asked "As things stand now, how far in school do you think you will get?"

Figure 3.18—Percentage of 1988 Hispanic eighth graders, by plans for further education



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Among Hispanic eighth graders, SES is related to students' further aspirations after high school. About 40 percent of high SES Hispanic students intend to attain a college degree, and 45 percent plan to continue their education after college (table 3.14). By contrast, less than one-third (28 percent) of the low SES Hispanic students plan to receive a college degree, and only 16 percent intend to continue their education after college. Similarly, only 3 percent of high SES students have no plans for further education after high school, while 23 percent of low SES students do not intend to continue their education after high school. Because students' high school education plans, confidence in high school graduation, and plans for further education are all related to their socioeconomic status, estimates in the following sections have been adjusted to control for SES.

High school plans of LM students

English proficiency, as measured by Hispanic LM students' self-assessment, is slightly related to intended high school program, after taking socioeconomic status into account. For example, Hispanic LM eighth graders with a low English proficiency are less likely than those with a high proficiency to plan on an academic program (table 3.12). Specifically, 25 percent of the highly proficient students plan on an academic program, in comparison with 12 percent of the low proficient students. In addition, highly proficient students are less likely to have "other" or unknown plans than students with a moderate proficiency (36 percent versus 42 percent).

Table 3.14—Unadjusted and adjusted percentage of 1988 Hispanic eighth graders with various future educational plans, by SES, NETIL status, and self-reported English proficiency*

	Attain advanced degree	Graduate from college	Attend some college	Attend vocational school	Have no educ. plans after HS
Total	21.5	33.2	17.1	10.7	17.5
Socioeconomic status (unadjusted)					
Low	15.8	28.4	18.7	13.7	23.4
Medium	22.1	37.5	16.8	9.4	14.1
High	45.2	39.3	10.5	1.9	3.0
NETIL status (adjusted for SES)					
NETIL	18.7	23.8	13.6	13.8	30.1
Non-NETIL	21.8	33.8	17.3	10.8	16.4
English proficiency (adjusted for SES)					
Low	9.0	23.2	11.0	18.7	38.2
Moderate	21.3	32.6	17.4	10.3	18.4
High	23.9	33.1	18.6	10.0	14.4

* Estimates for the indicated classifications have been adjusted for SES.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Teacher" surveys.

LM students' confidence in high school graduation

NETIL students and those with a moderate English proficiency are less confident that they will graduate from high school than Hispanic eighth graders who are more proficient in English. Among Hispanic NETIL students, only 56 percent are very sure of graduation, and 36 percent are probably sure (table 3.13). Among Hispanic non-NETIL students, on the other hand, 73 percent are very sure of their graduation, and 24 percent are probably sure. The confidence levels of the low and moderately proficient students mirror those of the NETIL students, while the highly English proficient students' feelings are similar to those of the non-NETIL students. Seventy-five percent of the highly proficient Hispanic students are very sure that they will graduate, and 22 percent are probably sure. In comparison, 62 percent of the moderately proficient Hispanic students are very sure that they will graduate, and 34 percent are probably sure. The differences among LM students with varying proficiencies who think they might not graduate from high school are not significant.

Future educational plans of LM students

Although similar percentages of NETIL and non-NETIL Hispanic eighth graders plan to attain a graduate degree, a smaller percentage of the NETIL students intend to attain a college degree. For example, 19 percent of the NETIL students intend to receive an advanced degree, and 24 percent plan to receive a college degree (table 3.14). Among the non-NETIL students, 22 percent intend to get an advanced degree, while 34 percent plan to receive a college degree. The most dramatic difference between Hispanic NETIL and non-NETIL students, however, is in the percentage of students who have no plans to continue their education after high school graduation. The NETIL students are twice as likely as non-NETIL students to have made this choice (30 percent versus 16 percent).

The same pattern exists between low and highly English proficient students. While 9 percent of the Hispanic students with a low English proficiency intend to continue their education after college graduation, 38 percent have no plans for further education after high school graduation. In contrast, 24 percent of the highly English proficient Hispanic students intend to pursue education after college, and only 14 percent have no educational plans after high school.

Parental aspirations for their children's education

Parental aspirations for their children have been hypothesized to affect the scholastic achievement of their children.[44] In this study, about one-quarter of Hispanic parents do not expect their children to attend college. A similar proportion (26 percent) expect their children to attend some college; 27 percent expect college graduation; and 23 percent expect their children to attain an advanced degree (table 3.15). Socioeconomic status is related to parental aspirations, with parents of high SES having greater ambitions for their children. For example, almost one-half (47 percent) of the Hispanic children with high SES are expected by their parents to achieve an advanced degree, compared with 15 percent of low SES Hispanic students. By contrast, 3 percent of high SES students are expected to only graduate from high school, as opposed to 25 percent of low SES students.

[44]For a review of some of the research on this subject, see R. Seginer, "Parents' Educational Expectations and Children's Academic Achievements: A Literature Review," *Merrill-Palmer Quarterly*, 29:1–23.

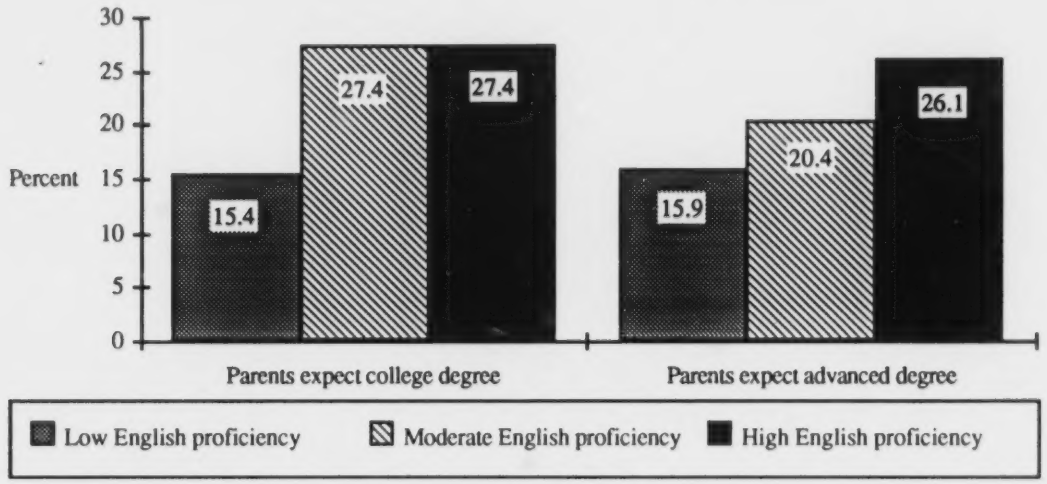
Table 3.15—Percentage of 1988 Hispanic eighth graders expected by their parents to attain various levels of education, by SES

	Parental expectations:					
	No HS diploma	HS diploma	Vocational school	Some college	College graduation	Advanced degree
Total	0.9	15.8	8.0	25.8	26.7	22.8
Socioeconomic status						
Low	1.6	24.6	9.2	29.9	19.9	14.8
Middle	0.3	8.8	8.3	26.4	30.5	25.8
High	0.0	3.4	1.4	5.3	42.8	47.1

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

After adjusting for SES, comparisons between the parents of NETIL and non-NETIL students, and among the parents of recognized LM, nonrecognized LM, and recognized non-LM students reveal very few significant differences. However, English proficiency is slightly related to parental expectations for postsecondary education. A smaller percentage of parents with low English proficient children than those with highly proficient children expect their children to graduate from college or attain an advanced degree. For example, 27 percent of the parents of highly English proficient Hispanic LM students expect their children to obtain a college degree, and an additional 26 percent expect them to receive a higher degree (figure 3.19). By contrast, only 15 percent of the parents of Hispanic LM students with a low English proficiency expect their children to graduate from college; another 16 percent expect a higher degree. Because of the small number of students described by this category (students of low proficiency whose parents expect an advanced degree), the difference between students of low and high proficiency who are expected to receive a higher degree is not statistically significant. However, the difference between students of moderate and high proficiency whose parents expect an advanced degree (20 percent versus 26 percent) is statistically significant.

Figure 3.19—Adjusted percentage of 1988 Hispanic LM eighth graders whose parents expect college graduation or an advanced degree, by students' self-reported English language proficiency*



* Estimates have been adjusted for SES.

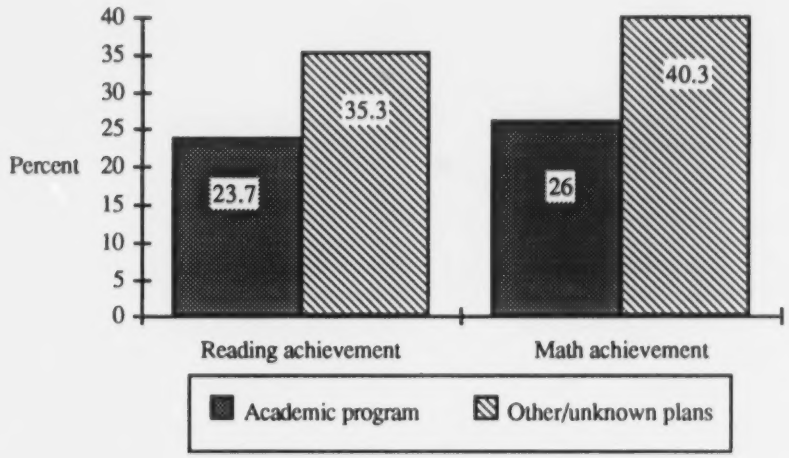
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Relationship of Hispanic Underachievement to Educational Aspirations

Students planning to enroll in an academic program fared better on both the reading and math achievement tests than those who did not know which high school program they would enroll in or who had plans other than the choices given. Among Hispanic students who planned future academic coursework, 24 percent failed to achieve the basic reading level, and 26 percent the basic math level. In contrast, 35 percent of those with "other" or unknown plans did not achieve the basic reading level, and 40 percent the basic math level (figure 3.20).

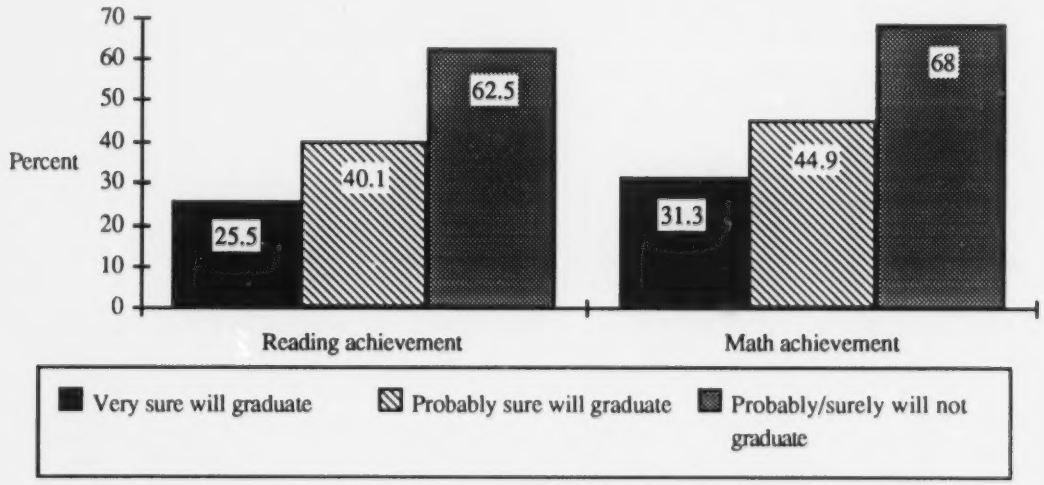
Among Hispanic eighth graders, confidence in high school graduation and achievement on both tests were also related. For both reading and math, the more confident students performed better than the less confident students. For example, among Hispanic students who were very sure of their graduation, 26 percent were unable to achieve the basic reading level and 31 percent were unable to achieve the basic math level (figure 3.21). Forty percent and 45 percent of those who were probably sure of their graduation did not achieve the basic reading and math level, respectively. In sharp contrast to both of those groups, 62 percent of the Hispanic students who stated they probably or surely would not graduate failed to achieve the basic reading level, and 68 percent failed to achieve the basic math level.

Figure 3.20—Percentage of 1988 Hispanic eighth graders unable to achieve the basic reading and math achievement levels, by intended HS program



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

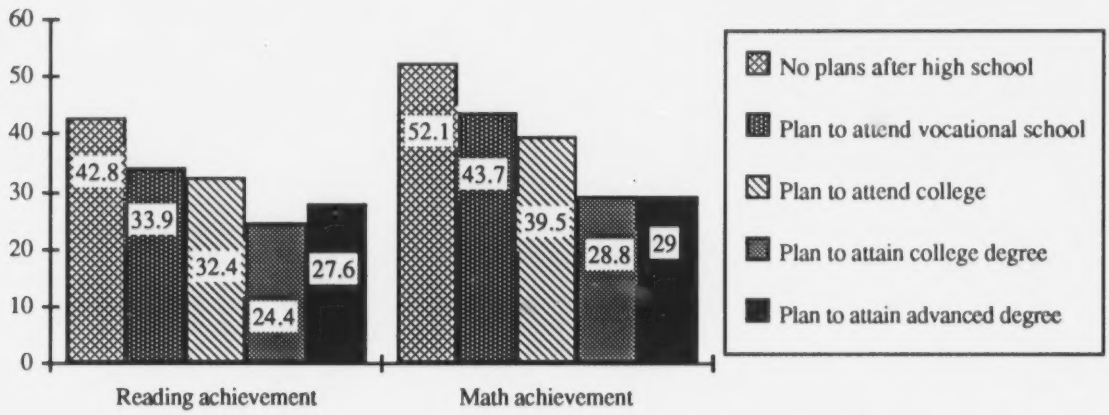
Figure 3.21—Percentage of 1988 Hispanic eighth graders unable to achieve the basic reading and math achievement levels, by confidence in HS graduation



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Hispanic students with no plans for further education after high school were also more likely than those with plans to attend college to be unable to achieve the basic reading and math levels. On the reading test, 43 percent of those with no future educational plans failed to achieve the basic level. In comparison, no more than 30 percent of those envisioning a college degree or an advanced degree failed to achieve the basic reading level (figure 3.22). On the math test, 52 percent of the students with no plans for education after high school failed to attain the basic level. In contrast, 29 percent of those planning to obtain a college degree or higher failed to attain the basic math level.

Figure 3.22—Percentage of 1988 Hispanic eighth graders unable to achieve the basic reading and math achievement levels, by students' plans for further education

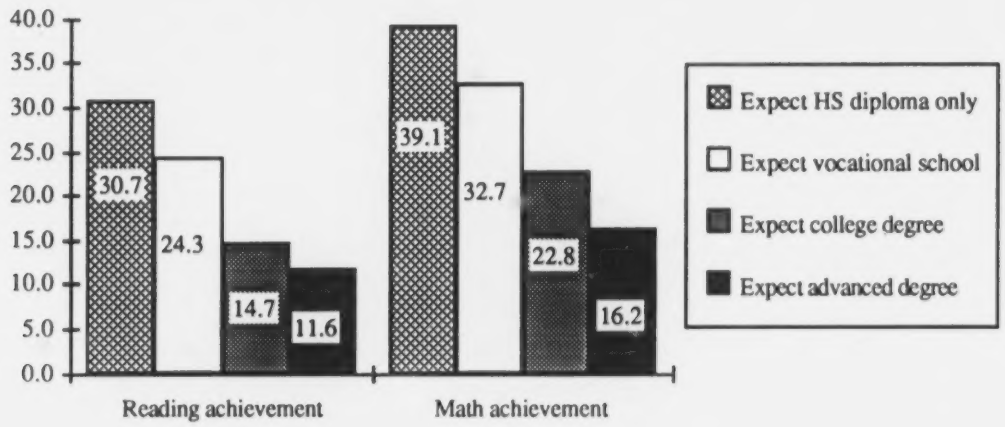


SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student" survey.

Parental aspirations for their children's education have an even stronger relationship to the students' achievement than do students' aspirations. Hispanic students whose parents expect them to graduate college or attain a higher degree were much more likely to achieve the basic reading level than Hispanic students whose parents have lower expectations. Specifically, only 15 percent of the Hispanic eighth graders whose parents expect them to receive a college degree and 12 percent whose parents expect a graduate degree failed to achieve the basic reading level (figure 3.23). In contrast, 31 percent of the students whose parents expect only high school graduation did not attain the basic level of performance.

On the math test, the pattern was similar. Thirty-nine percent of the Hispanic students whose parents expect only high school graduation failed to achieve the basic math level, while 23 percent of the Hispanic students whose parents expect a college degree and 16 percent of those whose parents expect an advanced degree did not achieve that level.

Figure 3.23—Percentage of 1988 Hispanic eighth graders unable to achieve the basic reading and math achievement levels, by parental expectations of the students' future education



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: "Base-Year Student and Parent" surveys.

Review

About three-fourths of the Hispanic student population come from bilingual families. Even so, only 39 percent are identified by at least one of their teachers as Language Minority students. About 8 percent of the non-excluded Hispanic student body are defined by at least one of their teachers as being Limited English Proficient. Less than 10 percent of the Hispanic students received instruction in a non-English language during their first 2 years of American schooling; about 20 percent were enrolled in a language assistance program.

The majority of Hispanic LM students indicate that they are not very proficient in their home language. Even among the most frequent users of their home language, about one-half of the Hispanic students indicate only a moderate proficiency in that language. Conversely, the majority of the Hispanic LM students (64 percent) state that they have a high English language proficiency. Interestingly, about one-third of the Hispanic students identified as LEP students by their teachers indicate that they have a high English proficiency.

Most of the Hispanic eighth graders (83 percent) were born in the United States. Almost all (92 percent) of the foreign-born Hispanic students are LM; about three-fourths of the native-born Hispanic students are LM. Not surprisingly, nativity is related to English proficiency. Almost three-fourths of the native-born Hispanic LM students are highly proficient in English, whereas less than one-half of the foreign-born Hispanic LM students are highly proficient. However, students living in the United States for longer periods are more likely to have greater English proficiency than those with shorter residencies.

Similar percentages of LM and non-LM Hispanic eighth graders failed to achieve the basic levels of performance on the reading and math tests. Among Hispanic LM students, those with low proficiency in English failed to achieve at a much higher rate than did students with high proficiency.

Socioeconomic status is positively related to English proficiency, with Hispanic LM students from high SES backgrounds being more likely to have a higher English proficiency than those from low SES backgrounds. For Hispanic students, socioeconomic status is also related to high aspirations for high school and further education, greater confidence in high school graduation, and high parental expectations of the students' further education. In addition, Hispanic students of high SES backgrounds failed to achieve the basic reading and math performance levels at a lower rate than did students of low SES.

Hispanic LM students with a high English proficiency are more likely than those with a low proficiency to plan on enrolling in an academic program while in high school and are more confident of their graduation from high school. They are also more likely to indicate that they intend to continue their education after college graduation and are less likely to have no educational plans after high school graduation than their less proficient peers.

Overall, confidence in high school graduation was related to reading and math achievement, with the more confident Hispanic students having a lower rate of failure on the tests. Hispanic students with no specific plans for their high school program failed to achieve the basic achievement levels at higher rates than did Hispanic students with plans to enroll in an academic program. Likewise, Hispanic students with no plans for further education after their high school education failed to achieve the basic levels in both tests at a higher rate than those Hispanic students who planned to go on to college after high school. Finally, Hispanic students whose parents expected more education after high school graduation also fared better on both the reading and math tests.

Chapter 4

Summary

The results of the study of 1988 Asian and Hispanic eighth graders as conveyed in this report have, until now, remained focused on the two separate ethnic groups; the analysis was not designed to compare one group to the other. However, such comparisons are perhaps inevitable, especially when the results are presented in one document. In addition, some might argue that comparisons in this case are informative, useful, and important. The following summary presents several of the major findings and points out the similarities and differences between the two groups.

Language Skills

Given the diverse backgrounds and cultural histories of the Asian and Hispanic children who are now educated in American schools, it is interesting and perhaps surprising to find that so many similarities exist between the two groups. Although the similarities undoubtedly stem from different causes, the Asian and Hispanic eighth-grade populations display a number of strikingly similar patterns. For example, although the proportion of native-born Asian students is far less than the proportion of native-born Hispanic students (52 percent versus 83 percent), the two populations reveal very similar language patterns. About three-quarters of all the Hispanic and Asian eighth graders are language minorities (73 percent of Asian students are LM; 77 percent of Hispanic students are LM) and the proportions of each group reporting a high, moderate, and low English proficiency are quite similar. In particular, about two-thirds of the students report a high English proficiency (Asians: 66 percent; Hispanics: 64 percent), not quite one-third report a moderate proficiency (Asians: 29 percent; Hispanics: 32 percent), and a small percent report a low English proficiency (Asians and Hispanics: 4 percent).

The patterns of agreement between teachers and students when asked to indicate the students' language minority status are, again, quite similar when comparing the Asian and Hispanic populations. For over one-half of the students, teacher identification of the students' LM status match that of the students' (52 percent of Asian students agree with the teacher report of LM status; 55 percent of Hispanic students agree). Slightly less than half of the Asian students (47 percent) state they are LM but teacher reports of LM status do not match their statements; 41 percent of the Hispanics student population have the same type of mismatch.

Relationship Between Language and Reading Underachievement

With these similarities as a backdrop, it is all the more interesting to note the similarities and differences between the two groups when looking at the proportions of students who failed to reach the basic levels on the reading and math achievement tests. Particularly on the reading test, far fewer differences exist between the Asian and Hispanic students than might be expected given the prevailing images of the two student populations.

When divided according to socioeconomic status, the patterns of underachievement on the reading test for both the Asian and Hispanic student populations are very similar. Almost 40 percent of low SES students fail to reach the basic reading level (Asians: 38 percent; Hispanics: 37 percent), and 27 percent of middle SES students fail to reach that level (Asians and Hispanics: 27

percent). Asian and Hispanic students of high SES are slightly different: 12 percent of high SES Asian students fail to achieve the basic reading level, while 19 percent of high SES Hispanic students fail to do so.

When dividing students according to language minority status, differences between the Asian and Hispanic students are revealed: 23 percent and 24 percent of Asian non-LM and LM students, respectively, failed to achieve the basic reading level, while 30 percent and 31 percent of Hispanic non-LM and LM students failed to achieve the basic reading level. When looking only at LM students and dividing them according to their English language proficiency, the similarities return. Almost two-thirds of LM students with a low English proficiency fail to achieve the basic reading level (Asians: 63 percent; Hispanics: 69 percent); almost one-third of LM students with moderate English proficiency fail to do so (Asian: 33 percent; Hispanics: 34 percent). Asian LM students with a high English proficiency, however, do have a lower failure rate than Hispanic LM students with a high English proficiency (19 percent versus 28 percent).

Relationship Between Language and Math Underachievement

Differences between the two populations become more apparent when comparing Asian and Hispanic underachievement on the math test. Greater proportions of Asian students reach the basic math level than do Hispanic students, whether divided by SES, LM status, or English language proficiency. The difference between Asian and Hispanic students of low SES is the only comparison which is not statistically significant (39 percent versus 42 percent). Asian students of middle SES had a lower failure rate on the math test than did Hispanic students of middle SES (25 percent versus 34 percent); the same is true of high SES students (Asians: 14 percent; Hispanics: 22 percent).

Twenty-three percent of Asian LM students failed to achieve the basic math level, compared to 37 percent of Hispanic LM students, and English language proficiency did not help to even out the difference. About one-quarter (24 percent) of Asian LM students with low English proficiency failed to achieve the basic math level; 58 percent of Hispanic LM students with low proficiency failed to do so. Although Hispanic students with greater proficiencies improved upon the failure rate, their rates still did not match those of similar Asian LM students: 25 percent and 22 percent of Asian LM students with moderate and high English proficiency, respectively, failed to achieve the basic math rate, compared to 37 percent and 35 percent of Hispanic LM students with moderate and high English proficiency.

Educational Outlook and Aspiration

Asian students and Hispanic students are different from each other when reviewing their educational outlook and aspirations. Thirty-eight percent of Asian students plan to enroll in an academic program in high school, while 31 percent are unsure of their plans. In comparison, 23 percent of Hispanic students plan to enroll in an academic high school program, while 39 percent are unsure. The differences narrow, but are still statistically significant, when the students are asked to indicate their confidence in their high school graduation. Seventy-eight percent of Asian students are very sure they will graduate, compared to 71 percent of Hispanic students. Twenty-one percent of Asian students indicate they probably will graduate, compared to 26 percent of Hispanic students. When indicating their plans for future education, 39 percent of Asian students state they will enter graduate school and an additional 38 percent say they will graduate from college. In contrast, 22 percent of Hispanic students state they will enter graduate school, and an additional 33 percent state they will graduate from college.

Relationship Between Educational Plans and Underachievement

As rates of achievement of the basic test levels are compared, differences between the Asian and Hispanic student populations continue to be revealed. For example, 17 percent of Asian students intending to enroll in an academic HS program failed to achieve the basic reading level, while 24 percent of Hispanic students with the same intention failed to achieve that level. Twenty-one percent of Asian students who believe they definitely will graduate from high school failed to achieve the basic reading level, compared with 26 percent of Hispanic students with the same belief. Eighteen percent of Asian students planning to attend graduate school failed to achieve the basic reading level, while 28 percent of Hispanic students with similar plans failed to achieve the basic level. Differences between Asians and Hispanics in the other categories (mentioned in the previous paragraph) are not statistically significant: those who are unsure about their HS program (32 percent of Asians versus 35 percent of Hispanics failed to achieve the basic reading level), those who were probably sure they would graduate (34 percent of Asians versus 40 percent of Hispanics), and those who planned to graduate from college (21 percent of Asians versus 24 percent of Hispanics).

Turning to the math achievement test, Asian students continue to have a lower failure rate than Hispanic students. While 17 percent of the Asians who intend to enroll in an academic HS program failed to achieve the basic math level, 26 percent of Hispanic students intending an academic program failed to achieve that level. The difference was larger for those students with unknown HS plans: 28 percent of the Asian students and 40 percent of the Hispanic students with unknown plans failed to achieve the basic math level. Twenty percent of Asian students, compared to 31 percent of Hispanic students, who believe they definitely will graduate from HS failed to achieve the basic math level. Finally, 17 percent of Asian students planning to attain an advanced degree and 22 percent of Asian students planning to graduate from college failed to achieve the basic math level. In comparison, 29 percent of Hispanic students planning to attain an advanced degree and 29 percent who plan to graduate from college failed to achieve that same basic math level.

Appendix A

Selected Survey Questions

This appendix duplicates the wording of some select items from the student and parent questionnaires. The items were either used to make composite variables or are provided solely for the reader's interest.

Questions used to specify the student's race and ethnicity:

31. Next we would like to ask you some background information.

31A. Which best describes you?

Asian or Pacific Islander	◊
Hispanic, regardless of race	◊
Black, not of Hispanic origin	◊
White, not of Hispanic origin	◊
American Indian or Alaskan Native	◊

31B. Which of these best categorizes your background?

ASIAN OR PACIFIC ISLANDER

	(MARK ONE)
Chinese	◊
Filipino	◊
Japanese	◊
Korean	◊
Southeast Asian (Vietnamese, Laotian, Cambodian/Kampuchean, Thai, etc.)	◊
Pacific Islander (Samoan, Guamanian, etc.)	◊
South Asian (Asian Indian, Pakistani, Bangladeshi, Sri Lankan, etc.)	◊
West Asian (Iranian, Afghan, Turkish, etc.)	◊
Middle Eastern (Iraqi, Israeli, Lebanese, etc.)	◊
Other Asian	◊

NOW GO ON TO QUESTION 32

31C. Which of these best categorizes your background?

HISPANIC

	(MARK ONE)
Mexican, Mexican-American, Chicano	◊
Cuban	◊
Puerto Rican	◊
Other Hispanic	◊

Questions used by the survey instrument to screen students for follow-up questions:

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21. Is any language other than English spoken in your home?

Yes ◊
No ◊

24. What language, other than English, do you currently use most often?

	(MARK ONE)
Spanish	◊
Chinese	◊
Japanese	◊
Korean	◊
A Filipino language	◊
Italian	◊
French	◊
German	◊
Greek	◊
Polish	◊
Portuguese	◊
Not applicable: I use only English	◊
Other	◊

Questions used to construct the student's home language proficiency measure:

QUESTIONS 25 AND 26 ARE ABOUT THE USE OF THE LANGUAGE YOU ANSWERED IN QUESTION 24

25. With regard to THAT LANGUAGE, how well do you do the following?

How well do you...	(MARK ONE ON EACH LINE)				
	Very Well	Pretty Well	Well	Not Very Well	Not At All
a. Understand that language when people speak it	◊	◊	◊	◊	◊
b. Speak that language	◊	◊	◊	◊	◊
c. Read that language	◊	◊	◊	◊	◊
d. Write that language	◊	◊	◊	◊	◊

Questions used by the survey instrument to screen parents for follow-up questions:

22A. Is any language other than English spoken in your home?

Yes ◊
No ◊

22C. What languages other than English are spoken in your home?	(MARK ALL THAT APPLY)	22D. Of these languages, which is most often spoken in your home?	(MARK ONE)
Spanish	◊		◊
Chinese	◊		◊
Japanese	◊		◊
Korean	◊		◊
A Filipino language	◊		◊
Italian	◊		◊
French	◊		◊
German	◊		◊
Greek	◊		◊
Polish	◊		◊
Portuguese	◊		◊
Other	◊		◊

Questions used to construct the parent's home language proficiency measure:

25. With regard to the language that you marked in Question 22D, how well do you do each of the following?

How well do you...	(MARK ONE ON EACH LINE) Very Well	Pretty Well	Well	Not Very Well	Not At All
a. Understand that language when people speak it	◊	◊	◊	◊	◊
b. Speak that language	◊	◊	◊	◊	◊
c. Read that language	◊	◊	◊	◊	◊
d. Write that language	◊	◊	◊	◊	◊

Questions used to construct the student's home language usage measure:

26. How often is THAT LANGUAGE spoken in each situation listed below?

(IF YOU DO NOT SEE THAT PERSON OFTEN, PLEASE MARK "Does Not Apply")

How often do (does): (MARK ONE ON EACH LINE)

	Always or most of the time	About half the time	Sometimes	Never	Does Not Apply
a. YOU speak that language to your mother (or female guardian)	◊	◊	◊	◊	◊
b. Your MOTHER (or female guardian) speak that language to you	◊	◊	◊	◊	◊
c. YOU speak that language to you father (or male guardian)	◊	◊	◊	◊	◊
d. Your FATHER (or male guardian) speak that language to you	◊	◊	◊	◊	◊
(e. was not used to construct the variable)					
f. Your GRANDPARENTS speak that language to you	◊	◊	◊	◊	◊
g. Your BROTHERS OR SISTERS speak that language to you	◊	◊	◊	◊	◊
h. YOU speak that language with your best friends in your neighborhood	◊	◊	◊	◊	◊
i. YOU speak that language with your best friends in school	◊	◊	◊	◊	◊

Questions used to construct the English language proficiency measure:

(student questionnaire:)

27. How well do you do the following?

How well do you...	(MARK ONE ON EACH LINE) Very Well	Pretty Well	Well	Not Very Well
a. Understand spoken English	◊	◊	◊	◊
b. Speak English	◊	◊	◊	◊
c. Read English	◊	◊	◊	◊
d. Write English	◊	◊	◊	◊

(parent questionnaire:)

26. With regard to English, how well do you do the following?

How well do you...	(MARK ONE ON EACH LINE) Very Well	Pretty Well	Well	Not Very Well	Not At All Well
a. Understand someone speaking English	◊	◊	◊	◊	◊
b. Speak English	◊	◊	◊	◊	◊
c. Read English	◊	◊	◊	◊	◊
d. Write English	◊	◊	◊	◊	◊

Questions asked of students regarding bilingual instruction and language assistance programs.

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28. During your first two years in school in the United States, were any of the following subjects taught to you in a language other than English? Do not include regular foreign language classes.

    IF THIS IS YOUR FIRST YEAR IN THE UNITED STATES, ANSWER FOR THIS YEAR ONLY.

	(MARK AT LEAST ONE ON EACH LINE)		
	Subject Taught in English	Subject Taught in Other Language	Subject Not Taught
a. Math	◊	◊	◊
b. Science	◊	◊	◊
c. United States literature or language such as reading or writing	◊	◊	◊
d. United States history, government or social studies	◊	◊	◊

29. Were you ever enrolled in an English language/language assistance program, that is, a program for students whose native language is not English?

    Yes ◊
    No ◊

Questions asked of students regarding their educational aspirations and level of confidence in educational success.

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49. In which program do you expect to enroll in high school?

College prep, academic, or specialized academic (such as Science or Math)	◊
Vocational, technical or business and career	◊
General high school program	◊
Other specialized high school (such as Fine Arts)	◊
Other	◊
I don't know	◊

45. As things stand now, how far in school do you think you will get?

Won't finish high school	◊
Will graduate from high school, but won't go any further	◊
Will go to vocational, trade, or business school after high school	◊
Will attend college	◊
Will graduate from college	◊
Will attend a higher level of school after graduating from college	◊

46. How sure are you that you will graduate from high school?

Very sure I'll graduate	◊
I'll probably graduate	◊
I probably won't graduate	◊
Very sure I won't graduate	◊

Questions asked of teachers regarding each student's language status:

ANSWER FOR EACH STUDENT	IF YES TO QUESTION 1: PLEASE INDICATE WHETHER THIS STUDENT:					
Student Number	11. Is a Language Minority (LM) student?*			12. Is a Limited English Proficiency (LEP) student?*		
	Yes	No	DK	Yes	No	DK

*See introduction page for definition.

Note from introduction page:

Reference is made to Language-Minority (LM) and Limited-English-Proficient (LEP) students as well as English-as-a-Second Language (ESL) programs throughout this questionnaire. For this study, the following definitions apply:

Language-Minority (LM) Students: A student in whose home a non-English language is typically spoken. Such students may include those whose English is fluent enough to benefit from instruction in academic subjects offered in English as well as students whose English proficiency is limited.

Limited-English-Proficient (LEP) Students: A student whose native language is other than English and whose skills in listening to, speaking, reading, or writing English are such that he/she derives little benefit from school instruction in English.

Appendix B

Technical Notes and Methodology

Technical Notes and Methodology

Estimates in this tabulation were based on the National Education Longitudinal Study of 1988 eighth graders (NELS:88). All data were drawn from the base-year survey, from the student, parent, and teacher components. All estimates for this sample were calculated using BYQWT, restricting the analysis to students who were self-identified as Asian/Pacific Islander or as Hispanic. The unit of analysis was always the student or student-parent or student-teacher pairs, thereby making the use of the student weight BYQWT appropriate. For more information on the NELS:88 surveys, interested readers should consult Ingels, et al., *National Educational Longitudinal Study of 1988 Base-Year: Student Component Data File Users' Manual* (Chicago: National Opinion Research Center, 1989).

Row variables were selected to describe student characteristics such as race–ethnicity, SES, and nativity of the student and his/her parents. Most of these variables were taken directly from the student or parent data files. One notable exception is the socioeconomic status variable, which was a composite created by NCES, averaging the non-missing values of five standardized components: father's and mother's educational levels, father's and mother's occupations, and family income. The parent questionnaire was the primary source of these components; for students without parent data (8.1 percent), student data was substituted.

There were a number of nativity and residency composites as well as several language proficiency and usage scale composites created from variables taken from the student and parent files. Language status composites were created from variables taken from the student and teacher files. Scales were created by combining responses to several items asked of the students and parents. The following tables show the composites created and the input variables and values used for each. For each of the language proficiency and usage scale composites, a factor analysis and a reliability analysis were performed to determine the feasibility of combining the items into a scale. Cronbach's alpha, shown in the upper right corner of the scale items' tables, is a measure of the internal consistency of a scale and is based on the average correlation of items within the scale; Cronbach's alpha has a possible range of zero to one. Following each composite or scale description is the unweighted frequency distribution for the Asian and Hispanic NELS:88 eighth graders.

TABLE 1 Composites for Student Nativity / Residency

Source	Composite	Composite name and values
BYP17	Student's nativity	knative
If BYP17 = 1		1 - native-born
If BYP17 = 2 or 3		2 - foreign-born
	Asian students	Hispanic students
Native-born	631	2,185
Foreign-born	692	441

TABLE 1 Composites for Student Nativity / Residency—Continued

Source	Composite	Composite name and values
BYP17 BYP18	Student's nativity/residency	knatres
If BYP17 =1		1 - born in U.S.
If BYP17 = 2, 3 AND		
BYP18 = 1, 2, 3, 7		2 - in U.S. less than 6 years
BYP18 = 4		3 - in U.S. 6-8 years
BYP18 = 5		4 - in U.S. 9-11 years
BYP18 = 6		5 - in U.S. more than 11 yrs

	Asian students	Hispanic students
Native-born	631	2,185
In U.S. < 6 years	163	92
In U.S. 6-8 years	179	122
In U.S. 9-11 years	183	115
In U.S. >11 years	169	117

TABLE 2 Composites for Parental Nativity / Residency

Source	Composite	Composite name and values
BYP11	Mother's nativity	mnative
If BYP11 = 1		1 - native-born
If BYP11 = 2 or 3		2 - foreign-born

	Asian students	Hispanic students
Native-born mother	228	1,353
Foreign-born mother	1,066	1,221

TABLE 2 Composites for Parental Nativity / Residency—Continued

Source	Composite	Composite name and values
BYP11 BYP12	Mother's nativity/residency	mnatres

If BYP11 = 1 — 1 - born in U.S.
If BYP11 = 2 or 3 AND
- BYP12 = 1, 2, or 8 — 2 - in U.S. less than 5 years
- BYP12 = 3 — 3 - in U.S. 6-10 years
- BYP12 = 4 — 4 - in U.S. 11-15 years
- BYP12 = 5 — 5 - in U.S. more than 15 years

	Asian students	Hispanic students
Mother native-born	228	1,353
Mother in U.S. < 5 years	134	63
Mother in U.S. 6-10 years	287	219
Mother in U.S. 11-15 years	256	252
Mother in U.S. >15 years	351	706

BYP14	Father's nativity	dnative

If BYP14 = 1 — 1 - native-born
If BYP14 = 2 or 3 — 2 - foreign-born

	Asian students	Hispanic students
Native-born father	331	1,228
Foreign-born father	966	1,276

BYP14 BYP15	Father's nativity/residency	dnatres

If BYP14 = 1 — 1 - born in U.S.
If BYP14 = 2 or 3 AND
- BYP15 = 1, 2, or 8 — 2 - in U.S. less than 5 years
- BYP15 = 3 — 3 - in U.S. 6-10 years
- BYP15 = 4 — 4 - in U.S. 11-15 years
- BYP15 = 5 — 5 - in U.S. more than 15 years

	Asian students	Hispanic students
Father native-born	331	1,228
Father in U.S. < 5 years	126	52
Father in U.S. 6-10 years	245	180
Father in U.S. 11-15 years	188	205
Father in U.S. >15 years	359	775

TABLE 3 Composites for Student's Language Proficiency

Source	Scale	Alpha statistic
	Student's English proficiency	.9104 (Hsp) .9372 (API)
BYS27A	How well do you understand spoken English	
BYS27B	How well do you speak English	
BYS27C	How well do you read English	
BYS27D	How well do you write English	
Original codes:	Very well=1 Pretty well=2 Well=3 Not very well=4	

The items were reverse-coded for the composite so that high scores indicate high proficiency.

low proficiency:	score < 2
medium proficiency:	2 <= score < 4
high proficiency:	score = 4

	Asian students	Hispanic students
Low English proficiency	47	76
Moderate English proficiency	357	729
High English proficiency	798	1,681

TABLE 3 Composites for Student's Language Proficiency—Continued

Source	Scale	Alpha statistic
	Student's home language proficiency	.9019 (Hsp) .8593 (API)
BYS25A	How well do you understand that language when people speak it to you	
BYS25B	How well do you speak that language	
BYS25C	How well do you read that language	
BYS25D	How well do you write that language	
Original codes:	Very well=1 Pretty well=2 Well=3 Not very well=4 Not at all=5	

The items were reverse-coded for the composite so that high scores indicate high proficiency.

low proficiency:	score < 2
medium proficiency:	2 <= score < 4
high proficiency:	score = 4

	Asian students	Hispanic students
Low home language proficiency	696	1,055
Moderate home language proficiency	359	1,063
High home language proficiency	140	359

TABLE 4 Composites for Student's Home language Usage

Student's home language usage .8789 (Hsp)
.8746 (API)

BYS26A	How often do you speak that language to your mother
BYS26B	How often does your mother speak that language to you
BYS26C	How often do you speak that language to you father
BYS26D	How often does your father speak that language to you
BYS26F	How often do your grandparents speak that language to you
BYS26G	How often do your [siblings] speak that language to you
BYS26H	How often do you speak that language with your best friends in the neighborhood
BYS26I	How often do you speak that language with your best friends in school

Original codes:
Always or most of the time=1
About half the time=2
Sometimes=3
Never=4
Does not apply=5

Items were reverse-coded for the composite so that high scores indicate frequent use.

low: score <= 2
medium: 2 < score <= 3.3
high: 3.3 < score

	Asian students	Hispanic students
Low frequency usage	386	698
Medium frequency usage	630	1,287
High frequency usage	178	486

TABLE 5 Composites for Parent's Language Proficiency

Source	Scale	Alpha statistic
	Parent's English proficiency	.9753 (Hsp) .9706 (API)
BYP26A	How well do you understand someone speaking English	
BYP26B	How well do you speak English	
BYP26C	How well do you read English	
BYP26D	How well do you write English	

Original codes:
Very well=1
Pretty well=2
Well=3
Not very well=4
Not at all well=5

All items were reverse-coded for the composite so that high scores indicate high proficiency.

low: score < 2
medium: 2 <= score < 4
high: score = 4

	Asian students	Hispanic students
Parent - low English proficiency	326	737
Parent - moderate English proficiency	326	453
Parent - high English proficiency	391	881

TABLE 5 Composites for Parent's Language Proficiency—Continued

Source	Scale	Alpha statistic
	Parent's home language proficiency	.9015 (Hsp) .9381 (API)
BYP25A	How well do you understand someone speaking that language	
BYP25B	How well do you speak that language	
BYP25C	How well do you read that language	
BYP25D	How well do you write that language	
Original codes:	Very well=1 Pretty well=2 Well=3 Not very well=4 Not at all well=5	

All items were reverse-coded for the composite so that high scores indicate high proficiency

low:	score < 2
medium:	2 <= score < 4
high:	score = 4

	Asian students	Hispanic students
Parent - low home language proficiency	168	378
Parent - moderate home language proficiency	179	690
Parent - high home language proficiency	692	1,008

TABLE 6 Composites for Student's Language Status

Source	Composite	Composite name and value
BYS21 BYT11	Language Minority Status	LM

1: neither teacher defined student as language minority AND student indicated that no second language was spoken in the home

2: neither teacher defined student as language minority BUT student indicated that a second language was spoken in the home

OR

at least one teacher defined student as language minority BUT student indicated that no second language was spoken in the home

3: at least one teacher defined student as language minority AND student indicated that a second language was spoken in the home

	Asian students	Hispanic students
Recognized LM	260	493
Nonrecognized LM	655	1,256
Recognized non-LM	429	974

BYT12	Limited English Proficiency Status	LEP

1: at least one teacher defined student as limited English proficient
2: neither teacher defined student as limited English proficient

	Asian students	Hispanic students
LEP	107	220
Not LEP	1,263	2,569

Response Rates

The following four tables display the response rates and sample sizes for selected variables used in the analyses. No imputation was performed on the analysis files received from NCES. The rates for the entire Hispanic student sample is followed by response rates and sample sizes of the Hispanic LM students, NETIL students, and LM but not NETIL students. Response rates and sample sizes for the corresponding Asian student sample follow the Hispanic student tables.

Table 7 NELS:88 Hispanic eighth graders' response rates for selected variables

	All Hispanic students	
	Valid responses (N)	Response rate (percent)
Total	3,171	
Ethnicity	3,129	98.68
SES	3,168	99.91
Student's nativity	2,626	82.81
Student's English language proficiency	2,486	78.40
Student's home language proficiency	2,477	78.11
Student's home language usage	2,471	77.92
Parent's English language proficiency	2,071	65.31
Student's response re LM status	3,170	99.97
Teacher response re student's LM status	2,724	85.90
Teacher response re student's LEP status	2,789	87.95
Student's educational plans	3,119	98.36
Confidence in HS graduation	3,113	98.17
Parental expectation of student's education	2,715	85.62
Valid math proficiency level	2,438	76.88
Valid reading proficiency level	2,510	79.15

TABLE 8 NELS:88 Hispanic LM eighth graders' response rates for selected variables

	LM students		NETIL students		LM, non-NETIL students	
	Valid responses (N)	Response rate (percent)	Valid responses (N)	Response rate (percent)	Valid responses (N)	Response rate (percent)
Total	2,513		220		1,994	
Ethnicity	2,496	99.32	218	99.09	1,981	99.35
SES	2,510	99.88	220	100.00	1,992	99.90
Student's nativity	2,063	82.09	174	79.09	1,697	85.11
Student's English language prof.	2,485	98.89	189	85.91	1,974	99.00
Student's home language prof.	2,476	98.53	194	88.18	1,962	98.40
Student's home language usage	2,470	98.29	188	85.45	1,960	98.29
Parent's English language prof.	1,898	75.53	164	74.55	1,547	77.58
Student's response re LM status	2,513	100.00	220	100.00	1,994	100.00
Teacher response re student's LM status	2,128	84.68	214	97.27	1,926	96.59
Teacher response re student's LEP status	2,189	87.11	220	100.00	1,994	100.00
Student's educational plans	2,464	98.05	215	97.73	1,963	98.45
Confidence in HS graduation	2,459	97.85	213	96.82	1,961	98.35
Parental expectation of student's education	2,142	85.24	176	80.00	1,762	88.37
Valid math proficiency level	1,916	76.24	151	68.64	1,598	80.14
Valid reading proficiency level	1,976	78.63	155	70.45	1,649	82.70

TABLE 9 NELS:88 Asian eighth graders' response rates for selected variables

	All Asian students	
	Valid responses (N)	Response rate (percent)
Total	1,527	
Ethnicity	1,505	98.56
SES	1,526	99.93
Student's nativity	1,323	86.64
Student's English language proficiency	1,202	78.72
Student's home language proficiency	1,195	78.26
Student's home language usage	1,194	78.19
Parent's English proficiency	1,043	68.30
Student response re LM status	1,524	99.80
Teacher response re student's LM status	1,344	88.02
Teacher response re student's LEP status	1,370	89.72
Student's educational plans	1,515	99.21
Confidence in HS graduation	1,508	98.76
Parental expectation of student's education	1,350	88.41
Valid math proficiency level	1,234	80.81
Valid reading proficiency level	1,269	83.10

Table 10 NELS:88 Asian LM eighth graders' response rates for selected variables

	LM students		NETIL students		LM, non-NETIL students	
	Valid responses (N)	Response rate (percent)	Valid responses (N)	Response rate (percent)	Valid responses (N)	Response rate (percent)
Total	1,207		107		981	
Ethnicity	1,197	99.17	89	83.18	975	99.39
SES	1,207	100.00	107	100.00	981	100.00
Student's nativity	1,033	85.58	86	80.37	876	89.30
Student's English language prof.	1,200	99.42	99	92.52	976	99.49
Student's home language prof.	1,193	98.84	99	92.52	968	98.67
Student's home language usage	1,192	98.76	99	92.52	967	98.57
Parent's English language prof.	986	81.69	84	78.50	830	84.61
Student's response re LM status	1,207	100.00	106	99.07	981	100.00
Teacher response re student's LM status	1,061	87.90	105	98.13	951	96.94
Teacher response re student's LEP status	1,079	89.40	107	100.00	981	100.00
Student's educational plans	1,199	99.34	105	98.13	976	99.49
Confidence in HS graduation	1,193	98.84	103	96.26	973	99.18
Parental expectation of student's education	1,058	87.66	87	81.31	894	91.13
Valid math proficiency level	971	80.45	80	74.77	826	84.20
Valid reading proficiency level	998	82.68	84	78.50	845	86.14

Standard Errors

The NELS:88 sample, while representative and statistically accurate, was not a simple random sample. Students were initially selected within schools grouped within strata. Sampling rates for schools within different strata varied, resulting in better data for policy purposes, but at a cost to statistical efficiency. Hence, simple random techniques for the estimation of standard errors frequently underestimate the true standard errors for some estimates. To overcome this problem, standard errors for all estimates in this tabulation were calculated using the STRATTAB program, which uses a Taylor series approximation to calculate standard errors based upon complex survey designs.[45] A version of this program is available from NCES upon request. The standard errors reported take into account the clustering in the sampling procedure; they are generally higher than standard errors calculated under the assumptions of simple random sampling.

To compare estimates for separate subgroups, or to understand the quality of the estimates, standard errors are needed. Each estimate has an associated standard error and the standard errors vary in size as a function of sample size and the sample design. Hence, the standard errors of the estimates for some small groups (e.g., Pacific Islander students) may be so large that the estimates should not be used. (While the estimates based on 30 or fewer cases were suppressed, the computer automatically produced estimates for subgroups with 31 or more cases.) The standard errors for all estimates used in this report have been reported in appendix C.

Adjustment Procedure

An initial examination of the data led to the finding that socioeconomic status bore a relationship to many of the other variables of interest as well. Because this study is based on bivariate analyses, it was important to try to control for the effects of socioeconomic status when looking at relationships between two other variables (such as ethnicity and the student's English proficiency) so that the relationships found were not confounded by the underlying differences in socioeconomic status. The procedure used was developed by Dennis Carroll at the National Center for Education Statistics and uses the socioeconomic distribution for each variable being studied, factoring out the differences attributable to socioeconomic status (SES).

The adjustment procedure is best described using real data; this example is an estimate used in chapter 3. Of the Hispanic eighth graders in 1988, 64.30 percent had a high self-assessed English proficiency. One question of interest is if differences exist between Mexican, Cuban, and Puerto Rican students' English proficiencies. Having looked at how differences in socioeconomic status affect students' assessments of their English language skills, and having observed Mexican, Cuban, and Puerto Rican students' dissimilar SES backgrounds, an additional question arises of whether the socioeconomic backgrounds of the students might obscure (or exaggerate) the relationship between ethnicity and English proficiency. To remove the differences due to socioeconomic status in order to look more simply at the relationship between ethnicity and English proficiency, the estimates are subjected to an adjustment procedure.

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[45]C. Ogden, "StratTab User's Guide," MPR Associates (1989).

Examining proficiency by socioeconomic status yields the following: 55.60 percent of low SES students had a high English proficiency; 72.61 percent of middle (25-75%) SES students had a high English proficiency; and 83.33 percent of high SES students had a high English proficiency. Each student has a variable (Y) representing whether or not they had a high self-assessed English proficiency; this variable Y has three possible values: missing, zero, and 100. A new variable (A) was constructed from Y to reflect an adjustment of Y by the socioeconomic distribution of Y as follows:

If Y = missing then A = missing;
otherwise,
If SES = low then A = Y + 64.30 - 55.60;
If SES = middle (25-75%) then A = Y + 64.30 - 72.61;
If SES = high then A = Y + 64.30 - 83.33.

The adjusted variable A was used to construct the classifications of "Ethnic subgroups -- adjusted for SES." As an example, before adjusting for SES, 62.51 percent of the Mexican students, 65.82 percent of the Cuban students, and 69.33 percent of the Puerto Rican students had a high English proficiency. After adjusting for SES, the estimate of highly English proficient Mexican students is 64.20 percent, of highly proficient Cuban students is 59.13 percent, and of Puerto Rican students is 68.73 percent. The effect of the adjustment procedure is to remove all the variation attributable to differences in the mean values of the adjustment variable (SES). The proportion of highly proficient Cuban students had been exaggerated because the Cuban students, on average, have a higher socioeconomic status than the other two student populations.

Use of the adjustment procedure places a statistical control for family socioeconomic status and makes it easier to consider the ethnicity variable without forming deeply stratified tables by SES. This approach also enhances the power of the estimates by enabling the use of larger groups (group size would be reduced if the sample were further stratified). Finally, this approach removes all the variation attributable to differences in the adjustment variable's means rather than only the linear component (as is true with regression approaches). The procedure slightly affects the standard errors of the estimates within categories, but does not affect the standard errors of the totals.

This adjustment procedure is slightly problematic in that it is possible to obtain out-of-range estimates. In a number of cases within these tables, the adjusted values were less than zero. Of course, it is impossible to have a negative percentage of students, but the adjustment procedure itself resulted in negative estimates. With one exception, the unadjusted estimates and/or the sample size were fairly small. In the one exception where the estimate was not small, the unadjusted estimate was 100 percent and the adjusted estimate was slightly over 100 percent.

This adjustment procedure was developed by Dennis Carroll of the National Center for Education Statistics, Longitudinal Studies Branch. Interested readers with further questions regarding the procedure should direct their queries to him at 555 New Jersey Avenue, NW, Washington, DC 20208-5652 (phone 202-219-1774).

Statistical Procedures

The statistical comparisons in this report were based on the **t** statistic. Generally, whether the statistical test is considered significant or not is determined by calculating a **t** value for the difference between a pair of means or proportions and comparing this value to published tables of values at certain critical levels, called alpha levels. The alpha level is an a priori statement of the probability of inferring that a difference exists when in fact it does not.

In order to make proper inferences and interpretations from the statistics a number of issues must be kept in mind. First, comparisons resulting in large **t** statistics may appear to merit special attention. This is somewhat misleading, since the size of the **t** statistic depends not only on the observed differences in means or percentage being compared but also on the number of respondents in the categories used for comparison, and on the degree of variability among respondents within categories. A small difference compared across a large number of respondents could result in a large **t** statistic. Second, when multiple statistical comparisons are made on the same data it becomes increasingly likely that an indication of a population difference will be erroneously given. Even when there is no difference in the population, at an alpha-level of .05 there is still a 5 percent chance of declaring that an observed **t** value representing one comparison in the sample is large enough to be statistically significant. As the number of comparisons increases, the risk of making such an error in inference also increases.

To guard against errors of inference based upon multiple comparisons, the Bonferroni procedure to correct significance tests for multiple contrast was used. This method corrects the significance (or alpha) level for the total number of contrasts made with a particular classification variable. For each classification variable, there are (K*(K-1)/2) possible contrasts (or nonredundant pairwise comparisons), where K is the number of categories. For example, since Hispanic ethnicity has four categories, K=4, and there are (4*3)/2=6 possible comparisons between the categories. The Bonferroni procedure divides the alpha-level for a single **t** test (for example, .05) by the number of possible pairwise comparisons, to give a new alpha that is corrected for the fact that multiple contrasts are being made.

Appendix C

Standard Error Tables

This appendix presents the standard errors of all the estimates reported. For tables and figures in the report that included estimates adjusted for socioeconomic status, the standard error table is followed by a table presenting the unadjusted estimates and standard errors.

Table A1—Standard errors for Table 1.1

Eighth graders	
Asian students	
English language proficiency	
Low	0.819
Moderate	1.651
High	1.835
Home language proficiency	
Low	1.726
Moderate	1.616
High	1.088
Hispanic students	
English language proficiency	
Low	0.669
Moderate	1.657
High	1.840
Home language proficiency	
Low	1.740
Moderate	1.170
High	1.385

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A2—Standard errors for Table 1.2

Ethnicity	
Asian students	
Chinese	1.525
Filipino	1.934
Japanese	1.028
Korean	1.123
Southeast Asian	1.312
Pacific Islander	1.367
South Asian	1.131
Other Asian*	1.395
Hispanic Total	
Mexican, Mexican-American, Chicano	2.238
Cuban	0.941
Puerto Rican	1.261
Other Hispanic	1.336

* West Asians and Middle Easterners were included with "other" Asians in this study because of the small number of students in these categories.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A3—Standard errors for Figure 2.1

	Chinese	Filipino	Japanese	Korean	Southeast Asian	Pacific Islander	South Asian	Other Asian
Total	1.525	1.934	1.028	1.123	1.312	1.367	1.131	1.395

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A4—Standard errors for Figure 2.2

	Socioeconomic status		
	Low	Medium	High
Total	1.524	1.712	1.891
Ethnicity			
Chinese	3.998	3.459	3.835
Filipino	2.164	3.695	3.768
Japanese	2.812	5.971	6.013
Korean	2.620	4.446	4.538
Southeast Asian	4.021	3.624	2.320
Pacific Islander	4.641	5.422	4.766
South Asian	3.579	5.644	6.143
Other	3.998	4.724	4.230

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A5—Standard errors for Table 2.1

	Native-born	Foreign-born
Total	1.999	1.999
Ethnic subgroups (adjusted for SES)		
Pacific Islander	4.192	4.191
Japanese	6.834	6.829
Other Asian	4.447	4.446
Chinese	3.622	3.622
Filipino	4.575	4.572
South Asian	6.042	6.045
Korean	4.122	4.124
Southeast Asian	3.080	3.081

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A6—Unadjusted data and standard errors for Table 2.1

	Native-born	Foreign-born
	(percentages)	
Total	52.35	47.65
Ethnic subgroups		
Pacific Islander	84.18	15.82
Japanese	72.45	27.55
Other Asian	66.86	33.14
Chinese	53.36	46.64
Filipino	53.40	46.60
South Asian	49.15	50.85
Korean	37.21	62.79
Southeast Asian	10.51	89.49
	(standard errors)	
Total	1.999	1.999
Ethnic subgroups		
Pacific Islander	4.180	4.180
Japanese	6.911	6.911
Other Asian	4.370	4.370
Chinese	3.789	3.789
Filipino	4.523	4.523
South Asian	6.246	6.246
Korean	4.213	4.213
Southeast Asian	3.021	3.021

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A7—Standard errors for Table 2.2

	First generation	Second generation	Third generation
Total	1.965	1.624	2.197

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Parent" survey.

Table A8—Standard errors for Table 2.3

	Non-LM	LM
Total	2.022	2.022
Student's nativity (unadjusted)		
Native-born	2.956	2.956
Foreign-born	1.849	1.849
Ethnic subgroups (adjusted for SES)		
Southeast Asian	2.967	2.967
Chinese	2.346	2.346
Filipino	3.840	3.840
South Asian	3.595	3.595
Korean	4.243	4.243
Japanese	5.812	5.812
Other Asian	4.503	4.503
Pacific Islander	6.165	6.165

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A9—Unadjusted data and standard errors for Table 2.3

	Non-LM	LM
	(percentages)	
Total	27.17	72.83
Ethnic subgroups		
Southeast Asian	12.35	87.65
Chinese	13.86	86.14
Filipino	17.21	82.79
South Asian	16.30	83.70
Korean	28.12	71.88
Japanese	36.99	63.01
Other Asian	44.77	55.23
Pacific Islander	62.13	37.87
	(standard errors)	
Total	2.022	2.022
Ethnic subgroups		
Southeast Asian	2.982	2.982
Chinese	2.385	2.385
Filipino	3.818	3.818
South Asian	3.731	3.731
Korean	4.302	4.302
Japanese	5.883	5.883
Other Asian	4.552	4.552
Pacific Islander	6.065	6.065

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A10—Standard errors for Figure 2.3

	Home language proficiency		
	Low	Moderate	High
Total	1.726	1.616	1.088

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A11—Standard errors for Figure 2.4

	Home language usage		
	Low frequency	Moderate frequency	High frequency
Total	2.169	2.019	1.257

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A12—Standard errors for Figure 2.5

	Home language proficiency		
	Low	Moderate	High
Total	1.726	1.616	1.088
Home language usage (adjusted for SES)			
Infrequent	2.492	2.181	1.690
Moderate	2.393	2.289	1.420
Frequent	4.383	4.649	3.871

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A13—Unadjusted data and standard errors for Figure 2.5

	Home language proficiency		
	Low	Moderate	High
	(percentages)		
Total	58.61	29.65	11.74
Home language usage			
Infrequent	77.74	13.85	8.31
Moderate	56.13	35.42	8.46
Frequent	25.60	45.27	29.13
	(standard errors)		
Total	1.726	1.616	1.088
Home language usage			
Infrequent	2.497	2.183	1.687
Moderate	2.387	2.286	1.420
Frequent	4.361	4.640	3.873

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A14—Standard errors for Table 2.4

	Home language proficiency		
	Low	Moderate	High
Total	1.726	1.616	1.088
Ethnicity (adjusted for SES)			
Japanese	7.895	6.733	4.974
Filipino	3.781	3.498	2.672
Other Asian	5.979	5.868	4.153
Pacific Islander	8.936	8.032	6.730
Korean	4.666	4.602	3.336
Southeast Asian	4.334	3.955	2.057
Chinese	3.472	3.339	1.866
South Asian	5.670	4.899	1.035

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A15—Unadjusted data and standard errors for Table 2.4

	Home language proficiency		
	Low	Moderate	High
	(percentages)		
Total	58.61	29.65	11.74
Ethnicity			
Japanese	41.81	35.15	23.04
Filipino	53.44	27.46	19.11
Other Asian	50.64	33.56	15.80
Pacific Islander	56.90	28.62	14.48
Korean	62.05	28.18	9.77
Southeast Asian	64.65	27.59	7.76
Chinese	60.88	32.34	6.78
South Asian	74.22	22.47	3.31
	(standard errors)		
Total	1.726	1.616	1.088
Ethnicity			
Japanese	7.856	6.729	4.935
Filipino	3.776	3.510	2.665
Other Asian	5.976	5.844	4.129
Pacific Islander	8.936	8.125	6.766
Korean	4.661	4.590	3.358
Southeast Asian	4.328	3.940	2.053
Chinese	3.486	3.335	1.862
South Asian	5.664	4.900	1.922

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A16—Standard errors for Figure 2.6

	English language proficiency		
	Low	Moderate	High
Total	0.819	1.651	1.835

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A17—Standard errors for Figure 2.7

	English language proficiency		
	Low	Moderate	High
Total	0.819	1.651	1.835
SES			
Low	2.575	3.775	3.761
Medium	1.152	2.237	2.377
High	0.987	2.593	2.757

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A18—Standard errors for Table 2.5

	English language proficiency		
	Low	Moderate	High
Total	0.819	1.651	1.835
Ethnicity (adjusted for SES)			
South Asian	0.301	4.346	4.416
Korean	1.276	4.441	4.573
Pacific Islander	1.956	7.630	7.842
Other Asian	1.713	5.318	5.582
Filipino	0.241	3.953	3.946
Chinese	1.796	3.445	3.346
Japanese	6.387	6.128	9.392
Southeast Asian	2.974	3.957	4.387
Home language proficiency (unadjusted)			
Low	0.897	2.132	2.416
Moderate	1.651	3.024	3.222
High	2.029	4.477	4.663

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A19—Unadjusted data and standard errors for Table 2.5

	English language proficiency		
	Low	Moderate	High
		(percentages)	
Total	4.21	29.32	66.47
Ethnicity			
South Asian	0.00	14.99	85.01
Korean	2.12	19.57	78.31
Pacific Islander	2.72	28.41	68.88
Other Asian	2.16	25.60	72.24
Filipino	0.18	29.53	70.29
Chinese	7.08	35.41	57.51
Japanese	7.81	29.86	62.33
Southeast Asian	10.45	39.44	50.12
		(standard errors)	
Total	0.819	1.651	1.835
Ethnicity			
South Asian	0.000	4.309	4.309
Korean	1.268	4.680	4.904
Pacific Islander	1.941	7.505	7.742
Other Asian	1.752	5.014	5.210
Filipino	0.183	3.894	3.875
Chinese	1.781	3.745	3.748
Japanese	6.247	6.396	9.103
Southeast Asian	3.119	4.089	4.830

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A20—Standard errors for Figure 2.8

	English language proficiency		
	Low	Moderate	High
Total	0.819	1.651	1.835
Student's nativity (adjusted for SES)			
Native-born	0.876	2.092	2.205
Foreign-born	1.221	2.235	2.322

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A21—Unadjusted data and standard errors for Figure 2.8

	English language proficiency		
	Low	Moderate	High
	(percentages)		
Total	4.21	29.32	66.47
Student's nativity			
Native-born	1.67	15.04	83.29
Foreign-born	6.03	36.87	57.10
	(standard errors)		
Total	0.819	1.651	1.835
Student's nativity			
Native-born	0.900	2.090	2.226
Foreign-born	1.279	2.245	2.439

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A22—Standard errors for Figure 2.9

	High English language proficiency
Total	1.835
Student's residency (adjusted for SES)	
<6 years	4.705
6-8 years	4.383
9-11 years	3.863
>11 years	5.179
Native-born	2.205

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A23—Unadjusted figures and standard errors for Figure 2.9

	High English language proficiency
	(percentages)
Total	66.47
Student's residency	
<6 years	31.21
6-8 years	54.67
9-11 years	73.83
>11 years	72.04
Native-born	83.29
	(standard errors)
Total	1.835
Student's residency	
<6 years	4.930
6-8 years	4.533
9-11 years	3.868
>11 years	5.271
Native-born	2.226

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A24—Standard errors for Table 2.6

	Home language proficiency	
	Low	Moderate
Total	1.726	1.616
Student's years in the U.S. (adjusted for SES)		
Less than 6 years	5.014	4.971
Between 6 and 8 years	4.835	4.810
Between 9 and 11 years	4.088	3.677
More than 11 years	4.955	4.613
Native-born	2.887	2.464

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A25—Unadjusted data and standard errors for Table 2.6

	Home language proficiency	
	Low	Moderate
	(percentages)	
Total	58.61	29.65
Student's years in the U.S.		
Less than 6 years	34.07	50.41
Between 6 and 8 years	62.32	30.21
Between 9 and 11 years	68.85	24.77
More than 11 years	66.69	25.85
Native-born	61.64	23.79
	(standard errors)	
Total	1.726	1.616
Student's years in the U.S.		
Less than 6 years	5.008	4.968
Between 6 and 8 years	4.854	4.811
Between 9 and 11 years	4.088	3.692
More than 11 years	4.960	4.606
Native-born	2.886	2.468

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A26—Standard errors for Table 2.7

	English language proficiency		
	Low	Moderate	High
Total	0.819	1.651	1.835
Parent's English language proficiency (adjusted for SES)			
Low	2.638	3.303	3.504
Moderate	1.252	3.155	3.101
High	0.266	2.336	2.280

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A27—Unadjusted data and standard errors for Table 2.7

	English language proficiency		
	Low	Moderate	High
	(percentages)		
Total	4.21	29.32	66.47
Parent's English language proficiency			
Low	11.19	40.92	47.90
Moderate	2.29	27.42	70.29
High	0.34	19.94	79.71
	(standard errors)		
Total	0.819	1.651	1.835
Parent's English proficiency			
Low	2.639	3.368	3.566
Moderate	1.315	3.068	3.102
High	0.250	2.370	2.313

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A28—Standard errors for Table 2.8

	Reading achievement	Math achievement
Total	1.858	1.780
Ethnicity (adjusted for SES)		
Pacific Islander	9.849	9.967
Other Asian	4.874	5.044
Filipino	4.024	4.049
Japanese	6.069	6.087
Chinese	2.968	2.985
Southeast Asian	3.777	3.807
Korean	4.721	4.509
South Asian	3.839	4.038
English proficiency (adjusted for SES)		
Low	7.482	9.002
Moderate	2.980	2.805
High	1.981	2.077

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A29—Unadjusted data and standard errors for Table 2.8

	Reading achievement	Math achievement
	(percentages)	
Total	24.41	22.79
Ethnicity		
Pacific Islander	42.36	49.71
Other Asian	30.30	29.87
Filipino	26.36	36.41
Japanese	22.12	30.81
Chinese	23.86	26.47
Southeast Asian	27.03	19.93
Korean	16.67	21.36
South Asian	8.78	20.20
English proficiency		
Low	69.95	31.93
Moderate	35.62	27.33
High	17.19	20.29
	(standard errors)	
Total	1.858	1.780
Ethnicity		
Pacific Islander	9.916	9.527
Other Asian	5.287	5.065
Filipino	4.065	3.813
Japanese	6.209	6.568
Chinese	3.330	2.891
Southeast Asian	3.894	4.254
Korean	4.593	4.456
South Asian	3.590	4.436
English proficiency		
Low	8.375	9.370
Moderate	3.035	2.859
High	2.070	2.105

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A30—Standard errors for Figure 2.10

	Reading Achievement		Math Achievement	
	Non-LM	LM	Non-LM	LM
Total	2.898	1.858	3.341	1.780

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A31—Standard errors for Figure 2.11

	Reading achievement Socioeconomic status			*Math achievement* Socioeconomic status		
	Low	Medium	High	Low	Medium	High
Total	3.705	2.284	1.923	3.705	2.368	2.012

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A32—Standard errors for Table 2.9

	Reading achievement Socioeconomic status			*Math achievement* Socioeconomic status		
	Low	Medium	High	Low	Medium	High
Total	3.705	2.284	1.923	3.705	2.368	2.012
English proficiency						
Low	Low-N	Low-N	Low-N	Low-N	Low-N	Low-N
Moderate	5.196	5.083	5.508	5.075	4.630	3.469
High	5.466	3.305	2.263	5.844	3.203	2.512

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A33—Standard errors for Figure 2.12

	Bilingual home identified as non-LM	Bilingual home identified as LM	Monolingual home identified as LM	Monolingual home identified as non-LM
Total	2.132	2.216	0.318	2.220

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A34—Standard errors for Figure 2.13

	English language proficiency		
	Low	Moderate	High
Total	0.819	1.651	1.835
LM status			
Recognized LM	1.827	2.649	2.877
Nonrecognized LM	0.775	2.052	2.109

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A35—Standard errors for Figure 2.14

	English language proficiency		
	Low	Moderate	High
Total	0.819	1.651	1.835
NETIL status			
NETIL	5.075	5.447	6.171
Non-NETIL	0.674	1.772	1.838

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A36—Standard errors for Table 2.10

	Subjects taught in a non-English language		
	Reading	Math	Other subjects
Total	1.164	0.856	0.868
Socioeconomic status (unadjusted)			
Low	3.097	2.219	2.550
Medium	1.437	1.082	0.922
High	1.344	1.259	1.202
LM status (adjusted for SES)			
Nonrecognized LM	1.080	0.860	0.805
Recognized LM	1.476	1.646	1.732

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A37—Unadjusted data and standard errors for Table 2.10

	Subjects taught in a non-English language		
	Reading	Math	Other subjects
	(percentages)		
Total	5.92	5.47	4.65
LM status			
Nonrecognized LM	3.73	3.30	2.52
Recognized LM	6.14	8.51	7.16
	(standard errors)		
Total	1.164	0.856	0.868
LM status			
Nonrecognized LM	1.075	0.867	0.821
Recognized LM	1.561	1.660	1.752

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A38—Standard errors for Table 2.11

	Ever enrolled in language program	Enrolled in 1st, 2nd, 3rd grd	Enrolled in 4th, 5th, 6th grd	Enrolled in 7th, 8th grd
Total	1.517	3.482	3.631	3.264
Socioeconomic status (unadjusted)				
Low	3.850	5.110	6.466	5.356
Medium	2.269	5.259	5.305	5.245
High	2.115	6.409	6.491	5.490
LM status (adjusted for SES)				
Recognized LM	2.528	4.261	4.627	3.890
Nonrecognized LM	1.770	6.260	5.892	5.793
NETIL status (adjusted for SES)				
NETIL	5.757	7.700	8.382	6.614
Non-NETIL	1.591	4.044	4.272	3.760
English proficiency (adjusted for SES)				
Low	9.147	Low-N	Low-N	Low-N
Moderate	3.128	5.031	5.006	4.606
High	1.604	3.575	4.103	3.200

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A39—Unadjusted data and standard errors for Table 2.11

	Ever enrolled in language program	Enrolled in 1st, 2nd, 3rd grd	Enrolled in 4th, 5th, 6th grd	Enrolled in 7th, 8th grd
		(percentages)		
Total	23.63	68.77	40.71	19.97
LM status				
Recognized LM	33.82	67.23	45.35	16.58
Nonrecognized LM	16.58	69.29	32.11	22.65
NETIL status				
NETIL	45.22	53.08	57.81	23.93
Non-NETIL	21.03	71.53	36.71	18.30
English proficiency				
Low	63.34	Low-N	Low-N	Low-N
Moderate	37.63	59.54	50.39	21.36
High	15.02	84.24	21.45	9.39
		(standard errors)		
Total	1.517	3.482	3.631	3.264
LM status				
Recognized LM	2.631	4.607	4.632	3.867
Nonrecognized LM	1.784	6.143	5.978	5.889
NETIL status				
NETIL	5.476	8.198	8.499	6.517
Non-NETIL	1.638	4.130	4.276	3.810
English proficiency				
Low	10.237	Low-N	Low-N	Low-N
Moderate	3.225	5.438	4.991	4.711
High	1.564	3.644	4.150	3.254

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A40—Standard errors for Table 2.12

	Reading achievement before SES adjustment	Reading achievement after SES adjustment
Total	1.858	1.858
LM status		
Recognized LM	3.182	3.107
Nonrecognized LM	2.075	1.893
NETIL status		
NETIL	7.493	7.532
Non-NETIL	1.876	1.745

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A41—Standard errors for Figure 2.15

	Academic program	Vocational program	General program	Special program	Other/ unknown plans
Total	1.771	1.384	0.961	0.594	1.406

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A42—Standard errors for Table 2.13

	Plan to enroll in				Unknown or other plans
	Academic program	Vocational program	General program	Special program	
Total	1.771	1.384	0.961	0.594	1.406
SES (unadjusted)					
Low	3.403	3.339	1.961	1.276	3.366
Middle	2.617	2.010	1.414	1.043	2.220
High	2.460	1.611	1.728	0.793	2.091
Ethnic groups (adjusted for SES)					
Korean	4.371	3.031	4.638	1.809	3.312
Japanese	6.088	3.254	5.293	3.254	5.554
South Asian	5.191	4.867	4.153	1.765	4.630
Southeast Asian	3.447	3.125	1.142	1.212	3.925
Chinese	3.051	2.442	1.754	1.224	2.893
Other Asian	3.963	3.444	3.889	1.883	4.044
Filipino	3.233	2.805	2.510	1.084	3.092
Pacific Islander	5.405	4.472	4.147	2.161	5.377
English proficiency (adjusted for SES)					
Low	5.034	5.051	2.289	3.169	8.972
Moderate	2.670	2.750	3.157	0.687	2.885
High	2.266	1.601	1.547	0.796	2.125

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A43—Unadjusted data and standard errors for Table 2.13

	Plan to enroll in				Unknown or other plans
	Academic program	Vocational program	General program	Special program	
	(percentages)				
Total	37.58	17.44	9.78	4.11	31.09
Ethnic groups					
Korean	51.94	9.93	10.75	6.06	21.32
Japanese	52.06	8.41	8.61	7.81	23.11
South Asian	52.25	16.74	8.23	1.80	20.97
Southeast Asian	37.83	18.02	3.55	2.42	38.17
Chinese	39.71	18.58	8.38	3.86	29.46
Other Asian	29.69	17.53	15.56	4.37	32.85
Filipino	30.94	21.98	10.08	3.50	33.50
Pacific Islander	23.51	18.76	11.48	3.42	42.83
English proficiency					
Low	18.89	9.75	7.84	4.35	59.17
Moderate	30.35	21.03	12.31	2.33	33.98
High	45.94	14.41	8.72	4.04	26.89
	(standard errors)				
Total	1.771	1.384	0.961	0.594	1.406
Ethnic groups					
Korean	4.505	3.008	2.865	1.825	3.328
Japanese	5.959	3.275	4.769	3.244	5.618
South Asian	5.643	5.128	3.195	1.787	4.645
Southeast Asian	3.505	2.993	1.263	1.223	4.047
Chinese	3.249	2.648	1.715	1.225	2.888
Other Asian	4.027	3.509	3.255	1.886	4.075
Filipino	3.368	2.878	1.916	1.074	3.114
Pacific Islander	5.538	4.401	3.602	2.175	5.377
English proficiency					
Low	5.703	5.178	4.568	3.186	9.374
Moderate	2.535	2.771	2.578	0.677	2.832
High	2.430	1.651	1.192	0.795	2.182

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A44—Standard errors for Figure 2.16

	Very sure will graduate	Probably sure will graduate	Probably/surely will not graduate
Total	1.378	1.341	0.356

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A45—Standard errors for Table 2.14

	Very sure will graduate	Probably sure will graduate
Total	1.378	1.341
Socioeconomic status (unadjusted)		
Low	3.426	3.218
Medium	2.056	2.024
High	1.639	1.658
Ethnic groups (adjusted for SES)		
South Asian	2.606	2.597
Southeast Asian	2.364	2.359
Korean	2.685	2.668
Other Asian	3.393	3.419
Chinese	3.109	2.987
Filipino	3.414	3.252
Japanese	5.662	5.638
Pacific Islander	6.482	6.287
English proficiency (adjusted for SES)		
Low	8.112	7.566
Moderate	2.903	2.866
High	1.655	1.590
NETIL status (adjusted for SES)		
NETIL	6.259	5.570
Non-NETIL	1.411	1.409

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A46—Unadjusted data and standard errors for Table 2.14

	Very sure will graduate	Probably sure will graduate
	(percentages)	
Total	78.05	20.79
Ethnic groups		
South Asian	92.56	7.44
Southeast Asian	82.62	17.11
Korean	88.23	11.77
Other Asian	79.42	20.58
Chinese	74.94	21.14
Filipino	73.02	26.40
Japanese	74.85	25.15
Pacific Islander	65.38	32.52
English proficiency		
Low	55.84	33.62
Moderate	66.99	31.97
High	84.35	14.87
NETIL status		
NETIL	56.56	39.02
Non-NETIL	79.45	19.54
	(standard errors)	
Total	1.378	1.341
Ethnic groups		
South Asian	2.716	2.716
Southeast Asian	2.356	2.354
Korean	2.643	2.643
Other Asian	3.520	3.520
Chinese	3.392	3.204
Filipino	3.459	3.285
Japanese	5.441	5.441
Pacific Islander	6.370	6.191
English proficiency		
Low	8.048	7.266
Moderate	2.868	2.834
High	1.715	1.641
NETIL status		
NETIL	6.425	5.616
Non-NETIL	1.429	1.425

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A47—Standard errors for Figure 2.17

	Graduate school	College graduation	College attendance	Post-secondary vocational school	No plans after HS graduation
Total	1.796	1.602	1.101	0.720	0.928

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A48—Standard errors for Table 2.15

	Plan to attain an advanced degree	No plans for further education after HS
Total	1.796	0.928
SES (unadjusted)		
Low	2.653	2.768
Medium	2.374	1.464
High	2.563	0.759
Ethnic groups (adjusted for SES)		
Korean	4.358	0.671
South Asian	5.910	0.776
Southeast Asian	3.477	2.509
Chinese	3.188	1.772
Other Asian	4.053	2.285
Japanese	6.012	3.536
Filipino	2.800	1.716
Pacific Islander	4.169	4.745
LM status (adjusted for SES)		
Recognized LM	2.872	1.318
Nonrecognized LM	2.492	1.151
Recognized non-LM	3.089	2.200

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A49—Unadjusted data and standard errors for Table 2.15

	Plan to attain an advanced degree	No plans for further education after HS
	(percentages)	
Total	38.69	6.88
Ethnic groups		
Korean	59.98	1.00
South Asian	61.69	0.65
Southeast Asian	33.74	7.57
Chinese	44.61	5.40
Other Asian	36.02	6.02
Japanese	38.96	9.25
Filipino	29.29	6.63
Pacific Islander	16.19	23.39
LM status		
Recognized LM	34.13	4.82
Nonrecognized LM	47.67	5.02
Recognized non-LM	27.82	11.88
	(standard errors)	
Total	1.796	0.928
Ethnic groups		
Korean	4.312	0.579
South Asian	6.062	0.653
Southeast Asian	3.554	2.556
Chinese	3.703	1.773
Other Asian	4.265	2.239
Japanese	5.798	3.643
Filipino	3.011	1.788
Pacific Islander	4.075	4.862
LM status		
Recognized LM	2.737	1.243
Nonrecognized LM	2.777	1.181
Recognized non-LM	3.211	2.315

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A50—Standard errors for Table 2.16

	Parental expectations:					
	No HS diploma	HS diploma	Vocational school	Some college	College graduation	Advanced degree
Total	0.075	1.043	0.669	1.215	1.639	2.016
Socioeconomic status (unadjusted)						
Low	0.222	3.124	1.795	3.645	3.815	3.379
Medium	0.144	1.675	1.168	1.801	2.494	2.646
High	0.000	0.698	0.599	1.122	2.653	2.803
LM status (adjusted for SES)						
Recognized LM	0.184	1.551	1.010	2.088	3.018	3.244
Nonrecognized LM	0.005	1.409	0.614	1.165	2.497	2.702
Recognized non-LM	0.257	2.484	2.110	2.838	4.061	3.359

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student, Parent, and Teacher" surveys.

Table A51—Unadjusted data and standard errors for Table 2.16

	Parental expectations:					
	No HS diploma	HS diploma	Vocational school	Some college	College graduation	Advanced degree
	(percentages)					
Total	0.10	7.43	3.63	11.95	34.93	41.95
LM status						
Recognized LM	0.19	5.97	2.22	14.17	32.97	44.48
Nonrecognized LM	0.00	7.61	1.70	5.59	33.23	51.87
Recognized non-LM	0.26	9.23	9.53	18.02	40.23	22.73
	(standard errors)					
Total	0.075	1.043	0.669	1.215	1.639	2.016
LM status						
Recognized LM	0.185	1.626	1.016	2.201	3.069	3.270
Nonrecognized LM	0.000	1.526	0.645	1.137	2.517	3.012
Recognized non-LM	0.257	2.626	2.125	3.066	4.040	3.589

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student, Parent, and Teacher" surveys.

Table A52—Standard errors for Figure 2.18

	Reading achievement		Math achievement	
	Academic program	Other/unknown plans	Academic program	Other/Unknown plans
Total	2.069	2.913	2.144	2.906

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A53—Standard errors for Figure 2.19

	Reading achievement		Math achievement	
	Very sure will graduate	Probably sure will graduate	Very sure will graduate	Probably sure will graduate
Total	1.666	3.480	1.663	3.634

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A54—Standard errors for Figure 2.20

	Reading achievement			Math achievement		
	No plans after HS	College degree	Advanced degree	No plans after HS	College degree	Advanced degree
Total	6.832	2.168	2.224	6.274	2.336	2.249

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A55—Standard errors for Figure 2.21

	Reading achievement Parent expects				*Math achievement* Parent expects			
	HS grad only	Vocational school	College degree	Advanced degree	HS grad only	Vocational school	College degree	Advanced degree
Total	6.392	8.700	1.704	1.143	6.707	9.483	1.941	1.216

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A56—Standard errors for Figure 3.1

	Mexican	Cuban	Puerto Rican	Other Hispanic
Total	2.238	0.941	1.261	1.336

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A57—Standard errors for Figure 3.2

	Socioeconomic status		
	Low	Medium	High
Total	1.703	1.470	0.768
Ethnic groups			
Mexican	2.118	1.926	0.649
Cuban	4.889	4.932	5.279
Puerto Rican	3.233	2.896	1.320
Other Hispanic	2.328	2.252	1.932

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A58—Standard errors for Figure 3.3

	Native-born	Foreign-born
Total	1.229	1.229

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A59—Standard errors for Table 3.1

	First generation	Second generation	Third generation
Total	1.302	1.976	2.828

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Parent" survey.

Table A60—Standard errors for Table 3.2

	Non-LM	LM
Total	1.230	1.230
Nativity (unadjusted)		
Native-born	1.527	1.527
Foreign-born	1.544	1.544
Ethnic groups (adjusted for SES)		
Mexican	1.189	1.189
Cuban	3.076	3.076
Puerto Rican	2.520	2.520
Other Hispanic	2.653	2.653

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A61—Unadjusted data and standard errors for Table 3.2

	Non-LM	LM
	(percentages)	
Total	22.65	77.35
Ethnic groups		
Mexican	18.33	81.67
Cuban	12.23	87.77
Puerto Rican	17.70	82.30
Other Hispanic	35.74	64.26
	(standard errors)	
Total	1.230	1.230
Ethnic groups		
Mexican	1.315	1.315
Cuban	3.237	3.237
Puerto Rican	2.640	2.640
Other Hispanic	2.670	2.670

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A62—Standard errors for Figure 3.4

	Home Language Proficiency		
	Low	Moderate	High
Total	1.740	1.170	1.385

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A63—Standard errors for Figure 3.5

	Home language usage		
	Infrequent	Moderate	Frequent
Total	1.942	2.080	3.177

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A64—Standard errors for Figure 3.6

	Home Language Proficiency		
	Low	Moderate	High
Total	1.740	1.170	1.385
Home language usage (adjusted for SES)			
Infrequent	2.086	1.941	1.002
Moderate	1.830	1.639	1.031
Frequent	3.598	2.346	3.320

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A65—Unadjusted data and standard errors for Figure 3.6

	Home Language Proficiency		
	Low	Moderate	High
	(percentages)		
Total	40.81	42.80	16.39
Home language usage			
Infrequent	76.44	17.61	5.94
Moderate	34.93	51.36	13.71
Frequent	15.61	52.15	32.25
	(standard errors)		
Total	1.740	1.170	1.385
Home language usage			
Infrequent	2.050	1.905	1.003
Moderate	1.866	1.666	1.032
Frequent	3.266	2.308	3.310

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A66—Standard errors for Figure 3.7

	English language proficiency		
	Low	Moderate	High
Total	0.669	1.657	1.840

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A67—Standard errors for Table 3.3

	English language proficiency		
	Low	Moderate	High
Total	0.669	1.657	1.840
Home language proficiency			
Low	1.227	1.927	2.076
Moderate	0.425	2.253	2.291
High	1.730	4.081	3.778

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A68—Standard errors for Table 3.4

	Home Language Proficiency		
	Low	Moderate	High
Total	1.740	1.170	1.385
Ethnic groups (adjusted for SES)			
Mexican	2.444	1.423	1.845
Cuban	4.997	4.307	3.789
Puerto Rican	2.965	3.926	3.287
Other Hispanic	3.390	2.904	2.268
Student's U.S. residency (adjusted for SES)			
Native-born	2.837	1.387	2.316
<6 years	6.536	6.262	6.223
6-8 years	4.024	6.034	5.840
9-11 years	4.858	5.624	4.371
>11 years	4.941	4.549	4.826

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A69—Unadjusted data and standard errors for Table 3.4

	Home Language Proficiency		
	Low	Moderate	High
	(percentages)		
Total	40.81	42.80	16.39
Ethnic groups			
Mexican	42.86	42.13	15.00
Cuban	32.02	54.00	13.97
Puerto Rican	35.68	44.66	19.66
Other Hispanic	38.85	42.03	19.11
Student's U.S. residency			
Native-born	45.33	40.15	14.52
<6 years	19.67	39.06	41.27
6-8 years	16.96	53.99	29.05
9-11 years	25.01	58.16	16.83
>11 years	34.88	48.35	16.77
	(standard errors)		
Total	1.740	1.170	1.385
Ethnic groups			
Mexican	2.407	1.465	1.843
Cuban	5.315	4.538	3.810
Puerto Rican	2.906	3.825	3.290
Other Hispanic	3.475	2.958	2.273
Student's U.S. residency			
Native-born	2.848	1.413	2.317
<6 years	7.009	6.350	6.234
6-8 years	3.977	5.976	5.840
9-11 years	4.988	5.924	4.361
>11 years	5.237	4.515	4.832

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A70—Standard errors for Table 3.5

	English language proficiency			Home Language Proficiency		
	Low	Moderate	High	Low	Moderate	High
Total	0.669	1.657	1.840	1.740	1.170	1.385
SES						
Low	0.902	2.089	2.249	2.079	1.773	2.521
Medium	0.896	1.991	2.414	2.165	1.924	1.276
High	0.063	2.730	2.730	4.035	4.188	2.251

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A71—Standard errors for Figure 3.8

	English language proficiency		
	Low	Moderate	High
Total	0.669	1.657	1.840
Student's nativity (adjusted for SES)			
Native-born	0.697	2.100	2.051
Foreign-born	1.584	3.268	2.730

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A72—Unadjusted data and standard errors for Figure 3.8

	English language proficiency		
	Low	Moderate	High
	(percentages)		
Total	3.90	31.80	64.30
Student's nativity			
Native-born	2.48	26.42	71.09
Foreign-born	7.70	49.26	43.04
	(standard errors)		
Total	0.669	1.657	1.840
Student's nativity			
Native-born	0.711	2.177	2.173
Foreign-born	1.577	3.554	3.084

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A73—Standard errors for Figure 3.9

	High English language proficiency
Total	1.840
Student's U.S. residency (adjusted for SES)	
<6 years	5.053
6-8 years	4.741
9-11 years	4.599
>11 years	4.911
Native-born	2.051

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A74—Unadjusted data and standard errors for Figure 3.9

	High English language proficiency
	(percentages)
Total	64.30
Student's U.S. residency	
<6 years	25.27
6-8 years	36.48
9-11 years	43.18
>11 years	59.69
Native-born	71.09
	(standard errors)
Total	1.840
Student's U.S. residency	
<6 years	4.793
6-8 years	5.189
9-11 years	4.824
>11 years	5.259
Native-born	2.173

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A75—Standard errors for Figure 3.10

	Home language proficiency		
	Low	Moderate	High
Total	1.740	1.170	1.385
Student's nativity (adjusted for SES)			
Native-born	2.837	1.387	2.316
Foreign-born	3.318	2.845	3.306

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A76—Unadjusted data and standard errors for Figure 3.10

	Home language proficiency		
	Low	Moderate	High
	(percentages)		
Total	40.81	42.80	16.39
Student's nativity			
Native-born	45.33	40.15	14.52
Foreign-born	25.18	50.03	24.78
	(standard errors)		
Total	1.740	1.170	1.385
Student's nativity			
Native-born	2.848	1.413	2.317
Foreign-born	3.502	2.881	3.309

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A77—Standard errors for Table 3.6

	English language proficiency		
	Low	Moderate	High
Total	0.669	1.657	1.840
Parent's English proficiency (adjusted for SES)			
Low	1.457	2.071	2.158
Moderate	0.471	4.106	4.032
High	0.495	2.043	2.076

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A78—Unadjusted data and standard errors for Table 3.6

	English language proficiency		
	Low	Moderate	High
	(percentages)		
Total	3.90	31.80	64.30
Parent's English proficiency			
Low	8.35	43.24	48.41
Moderate	0.86	35.90	63.24
High	1.10	19.74	79.16
	(standard errors)		
Total	0.669	1.657	1.840
Parent's English proficiency			
Low	1.457	2.196	2.297
Moderate	0.472	3.999	3.908
High	0.493	2.012	2.033

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A79—Standard errors for Table 3.7

	Reading Achievement		Math Achievement	
	Non-LM	LM	Non-LM	LM
Total	2.331	1.420	2.343	1.699
Ethnic groups (adjusted for SES)				
Mexican	3.283	1.805	3.090	2.182
Cuban	Low-N	4.290	Low-N	4.317
Puerto Rican	7.691	3.258	7.675	3.713
Other Hispanic	3.570	3.425	3.433	2.958

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A80—Unadjusted data and standard errors for Table 3.7

	Reading Achievement		Math Achievement	
	Non-LM	LM	Non-LM	LM
		(percentages)		
Total	30.18	31.02	36.10	36.62
Ethnic groups				
Mexican	30.15	28.98	40.70	36.17
Cuban	Low-N	26.32	Low-N	30.13
Puerto Rican	39.36	40.85	50.61	42.19
Other Hispanic	25.03	32.78	23.63	35.23
		(standard errors)		
Total	2.331	1.420	2.343	1.699
Ethnic groups				
Mexican	3.298	1.899	3.180	2.274
Cuban	Low-N	4.241	Low-N	4.599
Puerto Rican	7.762	3.379	7.978	3.733
Other Hispanic	3.609	3.583	3.516	3.016

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A81—Standard errors for Figure 3.11

	Reading Achievement	Math Achievement
Total	1.420	1.699
English proficiency (adjusted for SES)		
Low	7.088	7.024
Moderate	2.500	3.691
High	1.459	1.669

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A82—Unadjusted data and standard errors for Figure 3.11

	Reading Achievement	Math Achievement
	(percentages)	
Total	31.02	36.62
English proficiency		
Low	72.08	60.40
Moderate	35.35	38.59
High	26.71	34.27
	(standard errors)	
Total	1.420	1.699
English proficiency		
Low	6.772	6.680
Moderate	2.564	3.754
High	1.489	1.711

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A83—Standard errors for Figure 3.12

	Reading achievement Socioeconomic status			*Math achievement* Socioeconomic status		
	Low	Medium	High	Low	Medium	High
Total	1.716	1.600	2.543	2.117	1.815	2.744

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A84—Standard errors for Table 3.8

	Reading achievement Socioeconomic status			*Math achievement* Socioeconomic status		
	Low	Medium	High	Low	Medium	High
Total	1.716	1.600	2.543	2.117	1.815	2.744
English proficiency						
Low	7.480	Low-N	Low-N	8.106	Low-N	Low-N
Moderate	2.885	4.026	9.321	3.795	5.873	7.856
High	2.051	1.981	2.975	2.376	2.336	3.872

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A85—Standard errors for Figure 3.13

	Bilingual home identified as non-LM	Bilingual home identified as LM	Monolingual home identified as LM	Monolingual home identified as non-LM
Total	1.775	2.083	0.630	1.640

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A86—Standard errors for Figure 3.14

	English language proficiency		
	Low	Moderate	High
Total	0.669	1.657	1.840
LM status			
Recognized LM	1.292	2.191	2.490
Nonrecognized LM	0.380	2.330	2.364

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A87—Standard errors for Figure 3.15

	English language proficiency		
	Low	Moderate	High
Total	0.669	1.657	1.840
NETIL status			
NETIL	5.820	5.899	4.374
Non-NETIL	0.369	2.008	2.041

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A88—Standard errors for Table 3.9

	Subjects taught in a non-English language		
	Language Arts	Mathematics	Other subjects
Total	0.693	0.779	0.751
SES (unadjusted)			
Low	1.006	1.161	1.057
Medium	0.910	1.042	0.931
High	1.150	0.999	0.980
Student's nativity (adjusted for SES)			
Native-born	0.723	0.733	0.653
Foreign-born	2.028	1.942	2.138
LM status (adjusted for SES)			
Recognized LM	1.170	1.092	1.289
Nonrecognized LM	1.017	0.760	0.810
English language proficiency (adjusted for SES)			
Low	5.750	10.819	10.954
Moderate	1.203	1.480	1.232
High	0.645	0.616	0.523

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student, Parent, and Teacher" surveys.

Table A89—Standard errors for Table 3.9

	Subjects taught in a non-English language		
	Language arts	Mathematics	Other subjects
	(percentages)		
Total	8.46	7.98	6.49
Student's nativity			
Native-born	6.31	5.11	4.27
Foreign-born	13.17	17.11	12.04
LM status			
Recognized LM	6.74	4.64	4.61
Nonrecognized LM	8.54	9.78	7.27
English proficiency			
Low	18.34	38.95	32.67
Moderate	13.89	12.10	9.60
High	5.14	3.98	3.33
	(standard errors)		
Total	0.693	0.779	0.751
Student's nativity			
Native-born	0.747	0.759	0.664
Foreign-born	2.136	1.968	2.217
LM status			
Recognized LM	1.058	0.813	0.791
Nonrecognized LM	1.198	1.131	1.306
English proficiency			
Low	5.627	10.542	10.858
Moderate	1.256	1.531	1.249
High	0.657	0.629	0.530

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student, Parent, and Teacher" surveys.

Table A90—Standard errors for Table 3.10

	Ever enrolled in language program	Enrolled in 1st, 2nd, 3rd grd	Enrolled in 4th, 5th, 6th grd	Enrolled in 7th, 8th grd
Total	1.179	2.953	2.916	3.146
SES (unadjusted)				
Low	1.817	2.971	3.409	2.247
Medium	1.489	7.362	5.042	8.433
High	2.225	Low-N	Low-N	Low-N
LM status (adjusted for SES)				
Recognized LM	1.692	3.759	4.174	3.379
Nonrecognized LM	1.174	5.477	6.231	5.443
NETIL status (adjusted for SES)				
NETIL	4.896	7.978	7.928	7.661
Non-NETIL	1.172	3.150	3.544	2.679
English proficiency (adjusted for SES)				
Low	7.515	9.234	12.536	11.026
Moderate	2.062	3.847	4.430	3.913
High	1.138	3.258	3.918	2.577

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A91—Unadjusted data and standard errors for Table 3.10

	Ever enrolled in language program	Enrolled in 1st, 2nd, 3rd grd	Enrolled in 4th, 5th, 6th grd	Enrolled in 7th, 8th grd
		(percentages)		
Total	20.10	66.44	45.13	18.86
LM status				
Recognized LM	27.05	66.65	44.22	15.58
Nonrecognized LM	12.31	67.80	42.03	21.83
NETIL status				
NETIL	44.78	45.15	57.48	30.09
Non-NETIL	16.91	73.72	39.17	14.43
English proficiency				
Low	52.33	34.07	53.14	32.94
Moderate	30.28	64.88	49.25	21.34
High	12.96	76.09	38.72	12.19
		(standard errors)		
Total	1.179	2.953	2.916	3.146
LM status				
Recognized LM	1.701	3.725	4.090	3.430
Nonrecognized LM	1.234	5.391	5.706	5.516
NETIL status				
NETIL	4.745	7.839	7.691	8.055
Non-NETIL	1.211	3.122	3.392	2.724
English proficiency				
Low	7.087	9.718	12.390	12.578
Moderate	2.139	3.842	4.332	3.954
High	1.162	3.183	3.774	2.460

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A92—Standard errors for Table 3.11

	Reading Achievement		Math Achievement	
	Non-LM	LM	Non-LM	LM
Total	2.331	1.420	2.343	1.699
LM status (adjusted for SES)				
Recognized LM	—	2.295	—	1.932
Nonrecognized LM	7.592	1.850	5.753	2.289
Recognized non-LM	2.423	—	2.540	—

— These cells are empty. Non-LM students are either recognized non-LM or nonrecognized LM; LM students are either recognized LM or non-recognized LM. Placement depends upon teacher descriptions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A93—Standard errors for Table 3.11

	Reading Achievement		Math Achievement	
	Non-LM	LM	Non-LM	LM
		(percentages)		
Total	30.18	31.02	36.10	36.62
LM status				
Recognized LM	—	34.57	—	38.14
Nonrecognized LM	30.26	25.11	49.30	31.20
Recognized non-LM	27.66	—	32.99	—
		(standard errors)		
Total	2.331	1.420	2.343	1.699
LM status				
Recognized LM	—	2.383	—	1.964
Nonrecognized LM	7.785	1.897	5.866	2.362
Recognized non-LM	2.482	—	2.640	—

— These cells are empty. Non-LM students are either recognized non-LM or nonrecognized LM; LM students are either recognized LM or non-recognized LM. Placement depends upon teacher descriptions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A94—Standard errors for Figure 3.16

	Academic program	Vocational program	General program	Special program	Other/ unknown plans
Total	1.223	0.996	0.683	0.545	1.028

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A95—Standard errors for Figure 3.17

	Very sure will graduate	Probably sure will graduate	Probably/surely will not graduate
Total	1.106	0.976	0.432

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A96—Standard errors for Table 3.12

	Plan to enroll in				Unknown or other plans
	Academic	Vocational	General	Special	
Total	1.223	0.996	0.683	0.545	1.028
SES (unadjusted)					
Low	1.322	1.307	1.040	0.625	1.351
Medium	1.658	1.799	1.009	0.941	1.585
High	3.254	2.304	2.101	1.233	3.140
English proficiency (adjusted for SES)					
Low	3.194	6.915	2.764	1.781	6.112
Moderate	1.767	1.945	1.678	0.645	2.096
High	1.514	1.213	0.875	0.847	1.398

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A97—Unadjusted data and standard errors for Table 3.12

	Plan to enroll in				Unknown or other plans
	Academic	Vocational	General	Special	
			(percentages)		
Total	22.51	22.33	10.63	5.18	39.35
English proficiency					
Low	8.17	31.61	6.69	2.42	51.11
Moderate	18.21	24.18	10.22	3.17	44.22
High	24.94	22.17	10.65	6.18	36.06
			(standard errors)		
Total	1.223	0.996	0.683	0.545	1.028
English proficiency					
Low	2.967	6.811	2.722	1.769	6.346
Moderate	1.739	1.942	1.653	0.642	2.160
High	1.546	1.231	0.815	0.849	1.385

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A98—Standard errors for Table 3.13

	Very sure will graduate	Probably sure will graduate	Probably/surely will not graduate
Total	1.106	0.976	0.432
SES (unadjusted)			
Low	1.497	1.348	0.712
Medium	1.316	1.260	0.451
High	2.068	2.026	0.496
NETIL status (adjusted for SES)			
NETIL	3.825	3.779	2.385
Non-NETIL	1.073	0.990	0.380
English proficiency (adjusted for SES)			
Low	7.709	7.257	4.264
Moderate	2.170	2.161	0.918
High	1.285	1.137	0.418

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A99—Unadjusted data and standard errors for Table 3.13

	Very sure will graduate	Probably sure will graduate	Probably/surely will not graduate
	(percentages)		
Total	70.69	25.83	3.48
NETIL status			
NETIL	51.36	40.21	8.43
Non-NETIL	73.28	23.92	2.80
English proficiency			
Low	49.24	40.10	10.66
Moderate	59.32	36.70	3.98
High	75.61	22.01	2.38
	(standard errors)		
Total	1.106	0.976	0.432
NETIL status			
NETIL	4.016	3.849	2.420
Non-NETIL	1.142	1.039	0.389
English proficiency			
Low	8.145	7.507	4.319
Moderate	2.149	2.114	0.938
High	1.334	1.163	0.430

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A100—Standard errors for Figure 3.18

	Graduate school	College graduation	College attendance	Post-secondary vocational school	No plans after HS graduation
Total	0.859	0.890	0.776	0.711	0.831

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A101—Standard errors for Table 3.14

	Advanced degree	Graduate from college	Attend college	Attend voc school	Have no plans after HS
Total	0.859	0.890	0.776	0.711	0.831
SES					
Low	0.948	1.228	1.116	1.203	1.210
Medium	1.401	1.346	1.207	0.865	1.279
High	3.217	3.001	2.620	0.922	1.122
NETIL status (adjusted for SES)					
NETIL	2.700	3.112	2.379	3.103	3.984
Non-NETIL	0.916	0.937	0.872	0.719	0.790
English proficiency (adjusted for SES)					
Low	2.548	5.609	3.951	5.869	8.087
Moderate	1.638	2.166	1.492	1.539	1.428
High	1.169	1.465	1.126	0.746	0.952

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A102—Unadjusted data and standard errors for Table 3.14

	Advanced degree	Graduate from college	Attend college	Attend voc school	Have no plans after HS
			(percentages)		
Total	21.49	33.22	17.07	10.71	17.50
NETIL status					
NETIL	15.12	21.64	14.59	15.47	33.19
Non-NETIL	22.24	34.08	17.20	10.54	15.93
English proficiency					
Low	5.02	20.69	12.09	20.60	41.61
Moderate	18.83	30.96	18.14	11.44	20.63
High	24.21	33.40	18.50	9.84	14.06
			(standard errors)		
Total	0.859	0.890	0.776	0.711	0.831
NETIL status					
NETIL	2.768	3.003	2.385	3.122	3.898
Non-NETIL	0.981	0.961	0.883	0.728	0.835
English proficiency					
Low	2.496	5.723	4.005	5.851	8.033
Moderate	1.650	2.227	1.491	1.550	1.475
High	1.208	1.483	1.131	0.768	0.974

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Teacher" surveys.

Table A103—Standard errors for Table 3.15

	Parental expectations:					
	No HS diploma	HS diploma	Vocational school	Some college	College graduation	Advanced degree
Total	0.206	0.896	0.602	1.009	0.983	0.945
SES						
Low	0.387	1.540	0.946	1.457	1.366	1.120
Medium	0.170	1.015	0.943	1.418	1.673	1.365
High	0.000	1.179	0.804	1.410	3.229	3.248

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A104—Standard errors for Figure 3.19

	Parental expectations:	
	College graduation	Advanced degree
Total	0.983	0.945
English proficiency (adjusted for SES)		
Low	4.317	4.672
Moderate	1.687	1.916
High	1.295	1.325

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A105—Unadjusted data and standard errors for Figure 3.19

	Parental expectations: College graduation	Parental expectations: Advanced degree
	(percentages)	
Total	26.70	22.79
English proficiency		
Low	11.65	11.11
Moderate	24.72	17.08
High	27.78	26.66
	(standard errors)	
Total	0.983	0.945
English proficiency		
Low	4.116	4.297
Moderate	1.685	1.924
High	1.309	1.423

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

Table A106—Standard errors for Figure 3.20

	Reading achievement		Math achievement	
	Academic program	Other/unknown plans	Academic program	Other/Unknown plans
Total	2.079	1.885	2.057	2.200

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A107—Standard errors for Figure 3.21

	Reading achievement			Math achievement		
	Very sure will graduate	Probably sure will graduate	Probably/surely will not graduate	Very sure will graduate	Probably sure will graduate	Probably/surely will not graduate
Total	1.503	2.209	5.325	1.514	3.096	5.302

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A108—Standard errors for Figure 3.22

	Advanced degree	College degree	College attendance	Vocational school	No plans after HS
			Reading achievement		
Total	2.469	1.907	2.376	3.279	2.595
			Math achievement		
Total	2.364	1.739	3.327	3.319	2.962

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student" survey.

Table A109—Standard errors for Figure 3.23

	Parent expects:			
	Advanced degree	College degree	Vocational school	HS graduation
		Reading achievement		
Total	1.439	1.577	3.583	3.747
		Math achievement		
Total	1.714	1.968	3.931	3.254

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "Base-Year Student and Parent" surveys.

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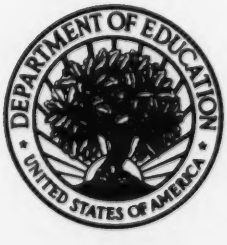
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